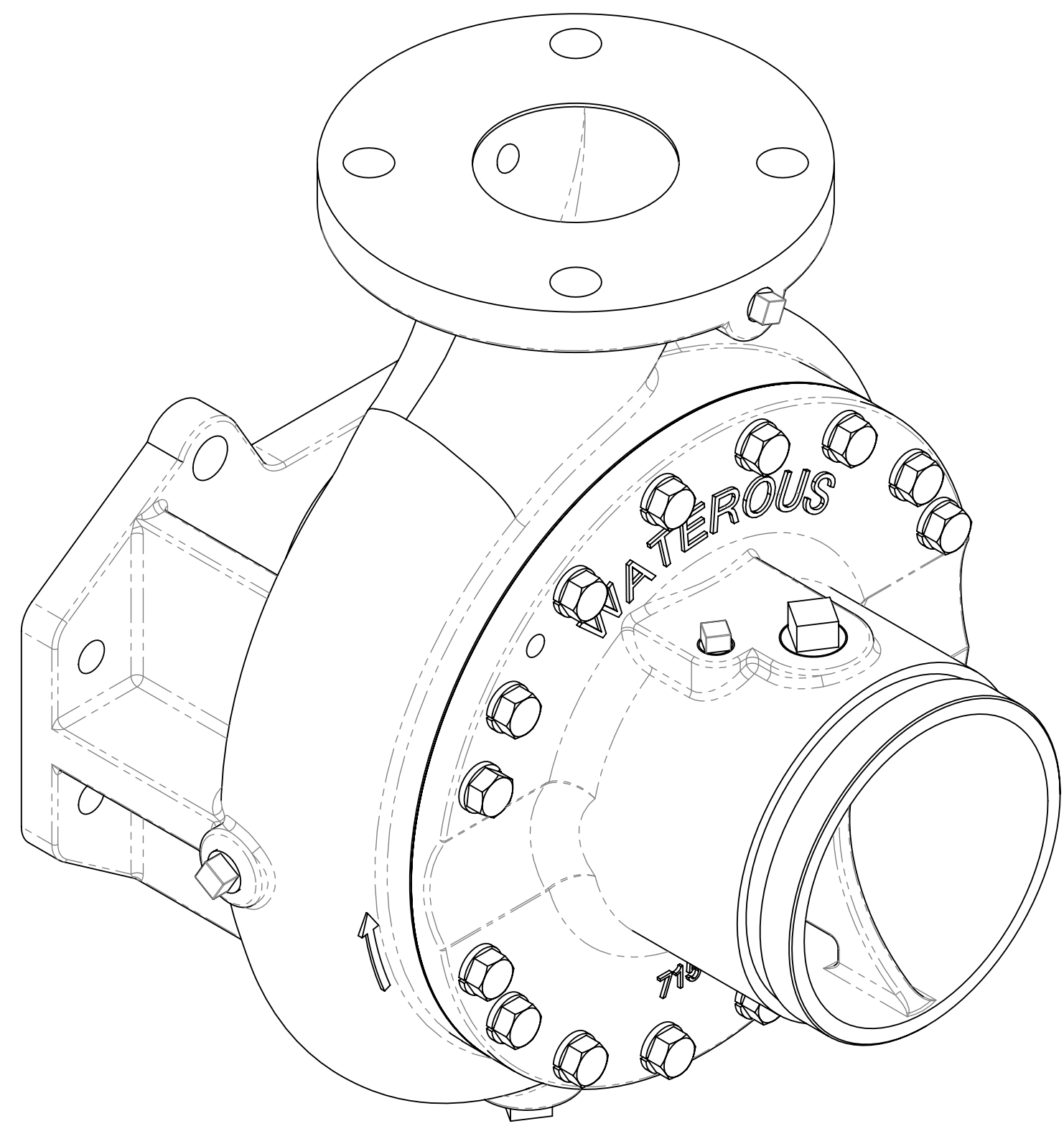


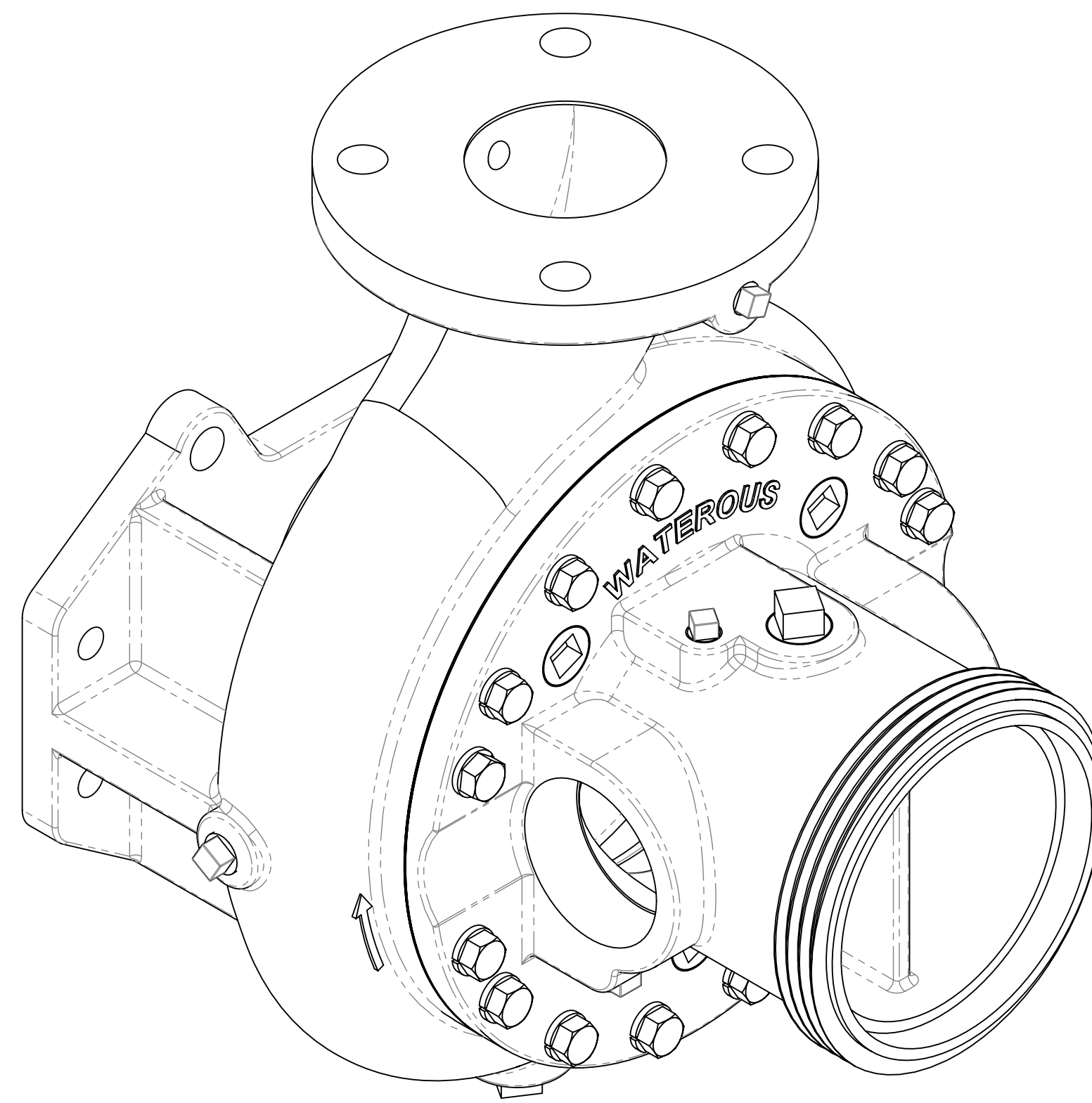
## CG Series Fire Pump Dimensional Drawings

Pump Models: CGV, CGVR, CGVG

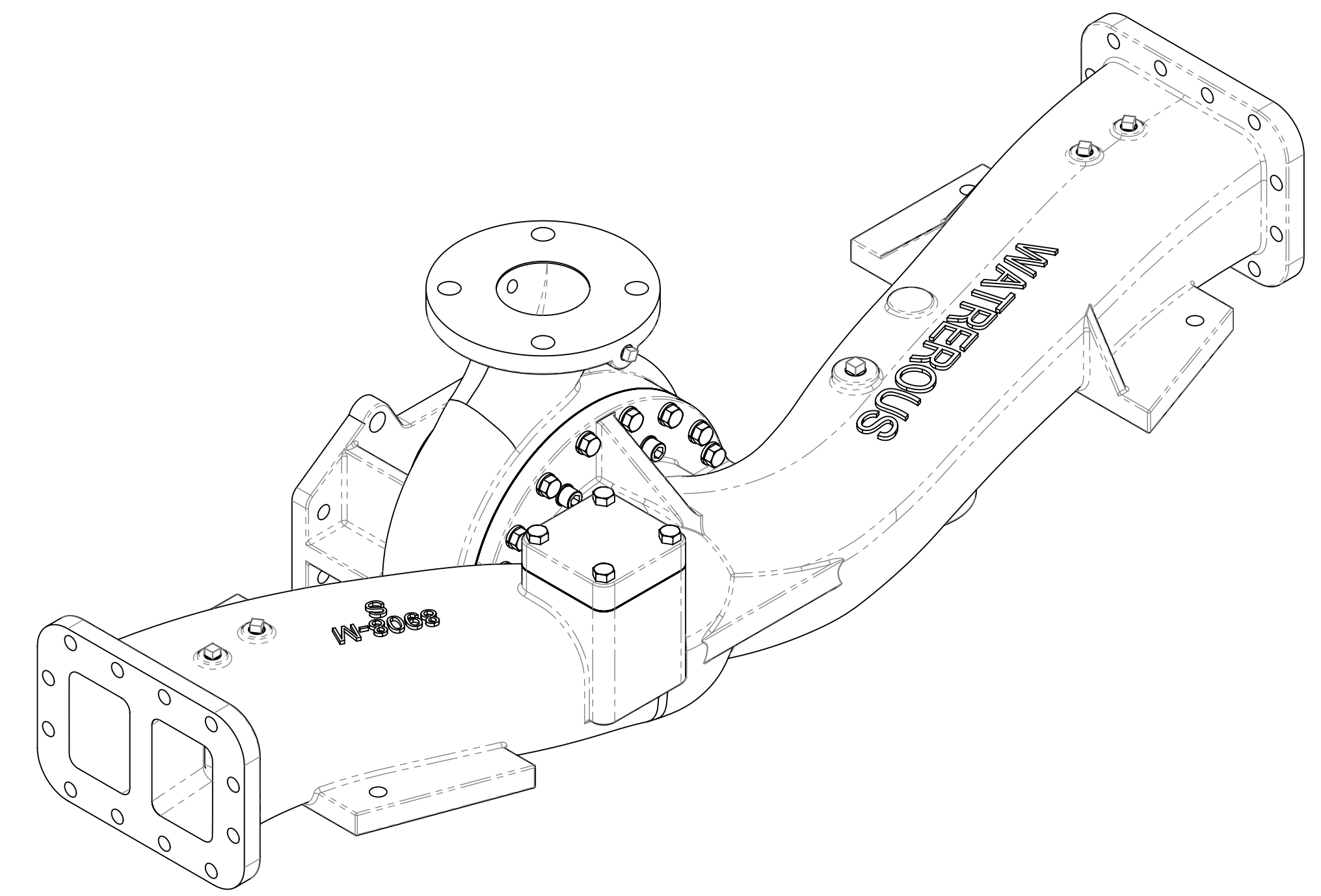
Feature	See Page		
	CGV	CGVR	CGVG
Basic Pump Body Dimensions without Transmission	3	4	5
Optional 4 in. Victaulic Discharge Fitting			
Pump with Transmission	See Table on Page 2		



**CGV**



**CGVR**



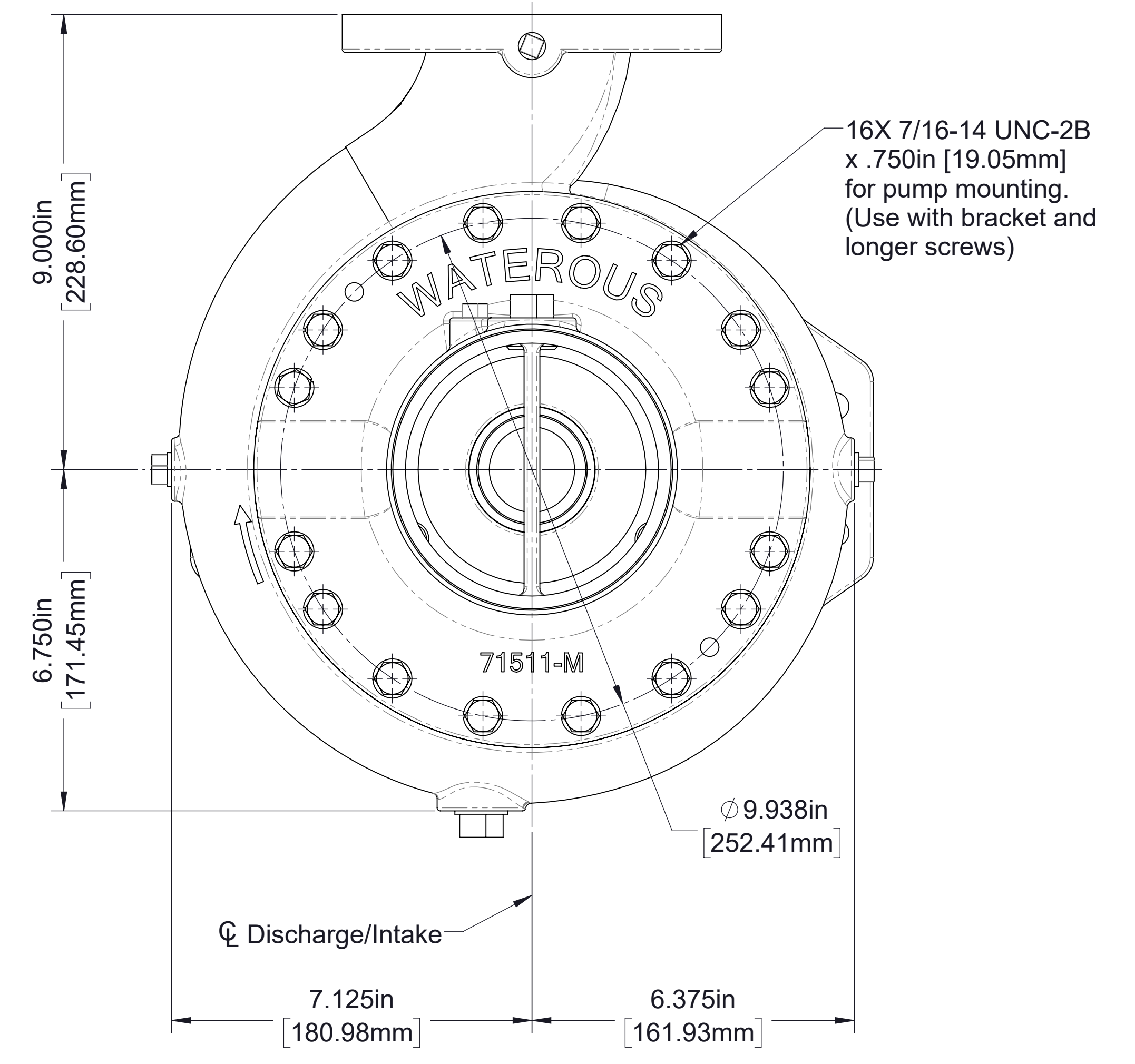
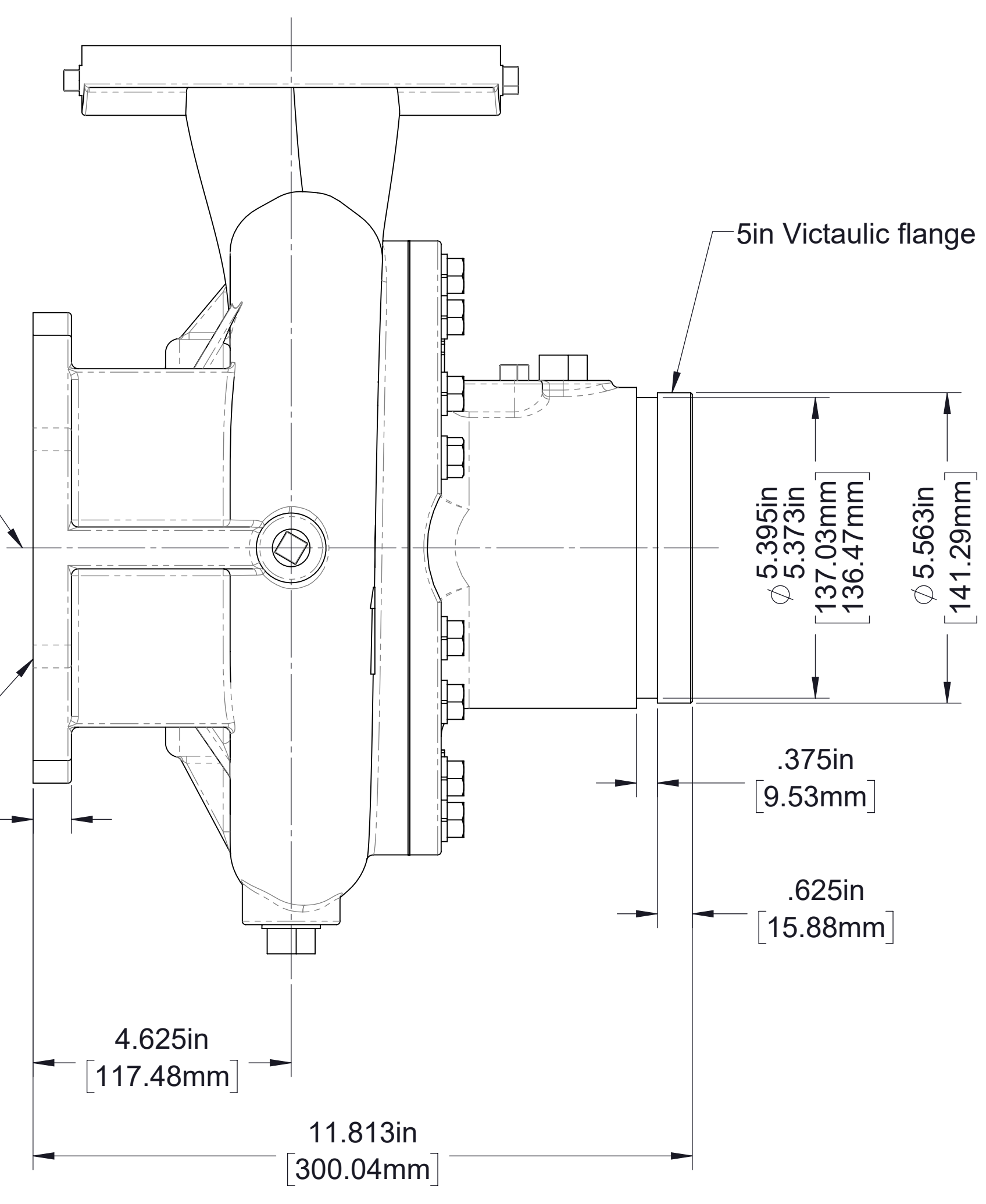
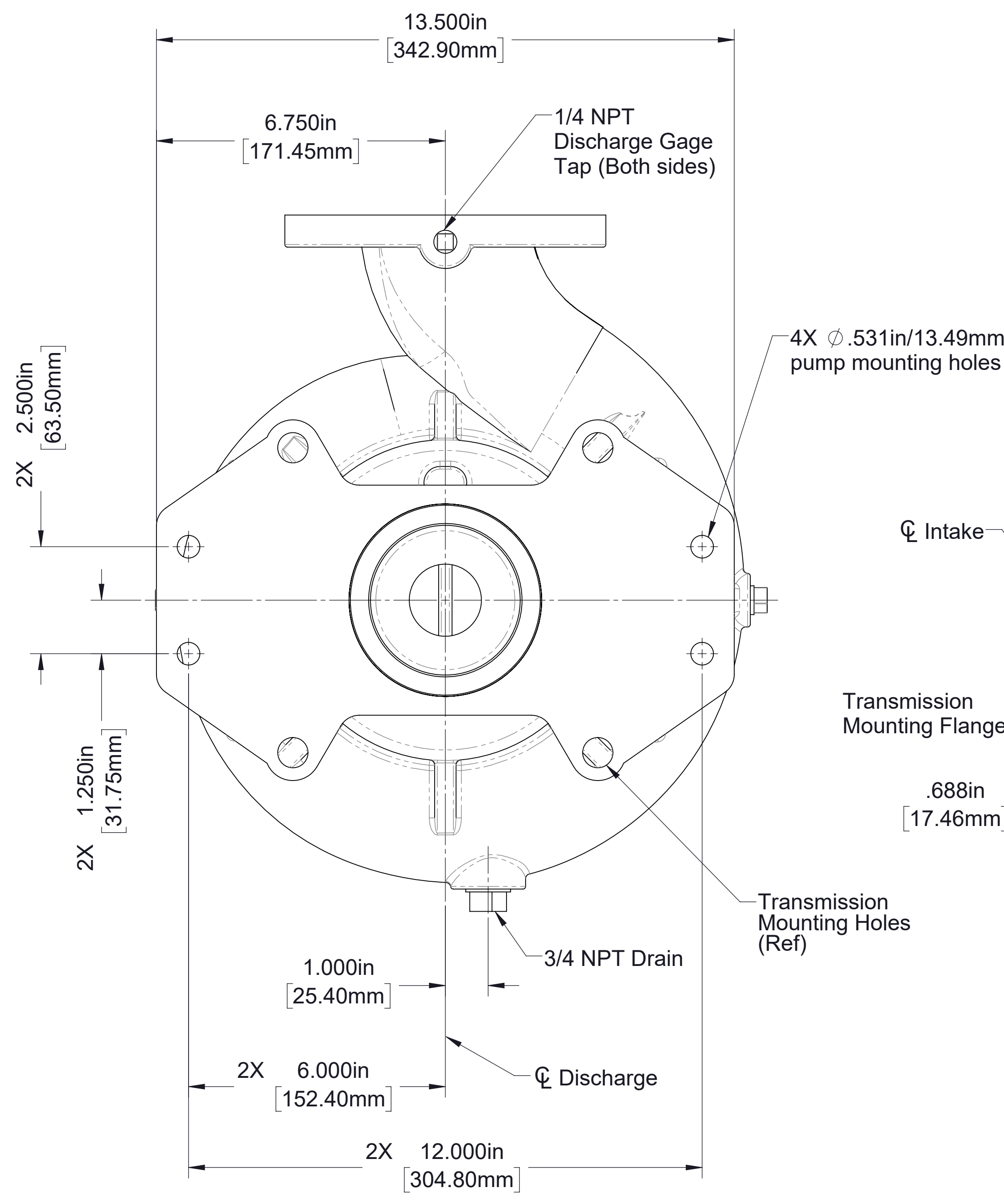
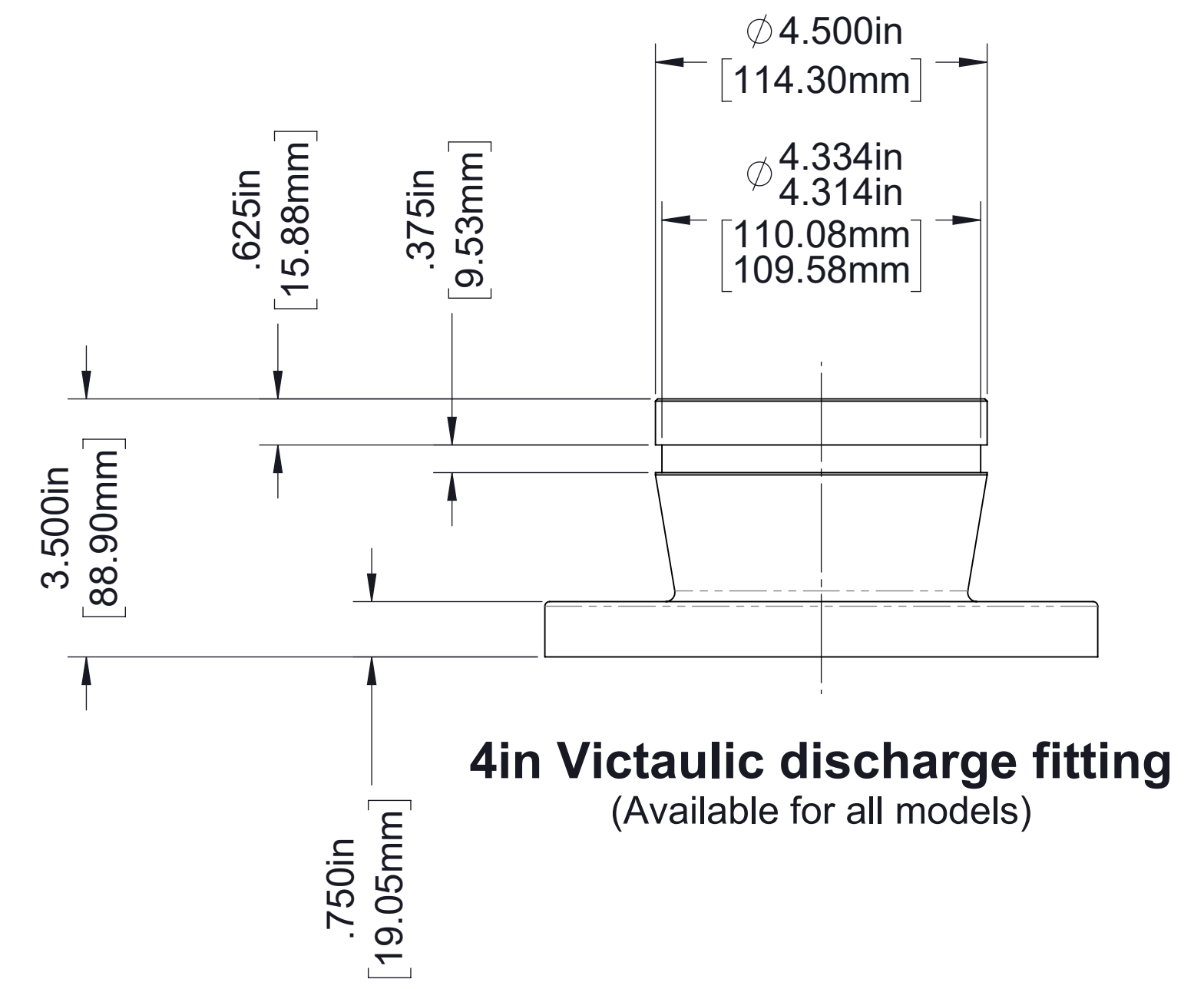
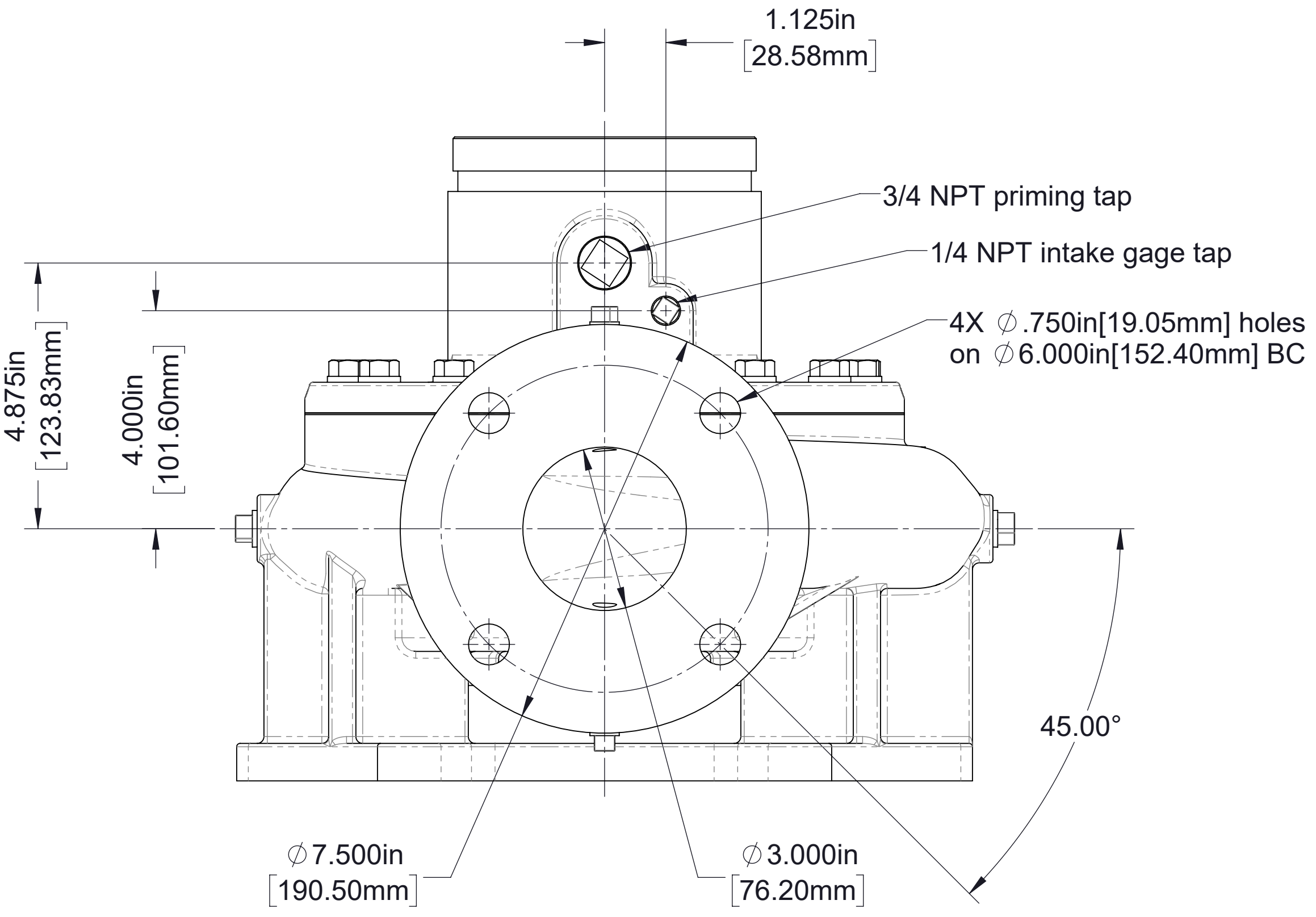
**CGVG**

Note: Pump must be installed in accordance with Waterous Installation Instructions.

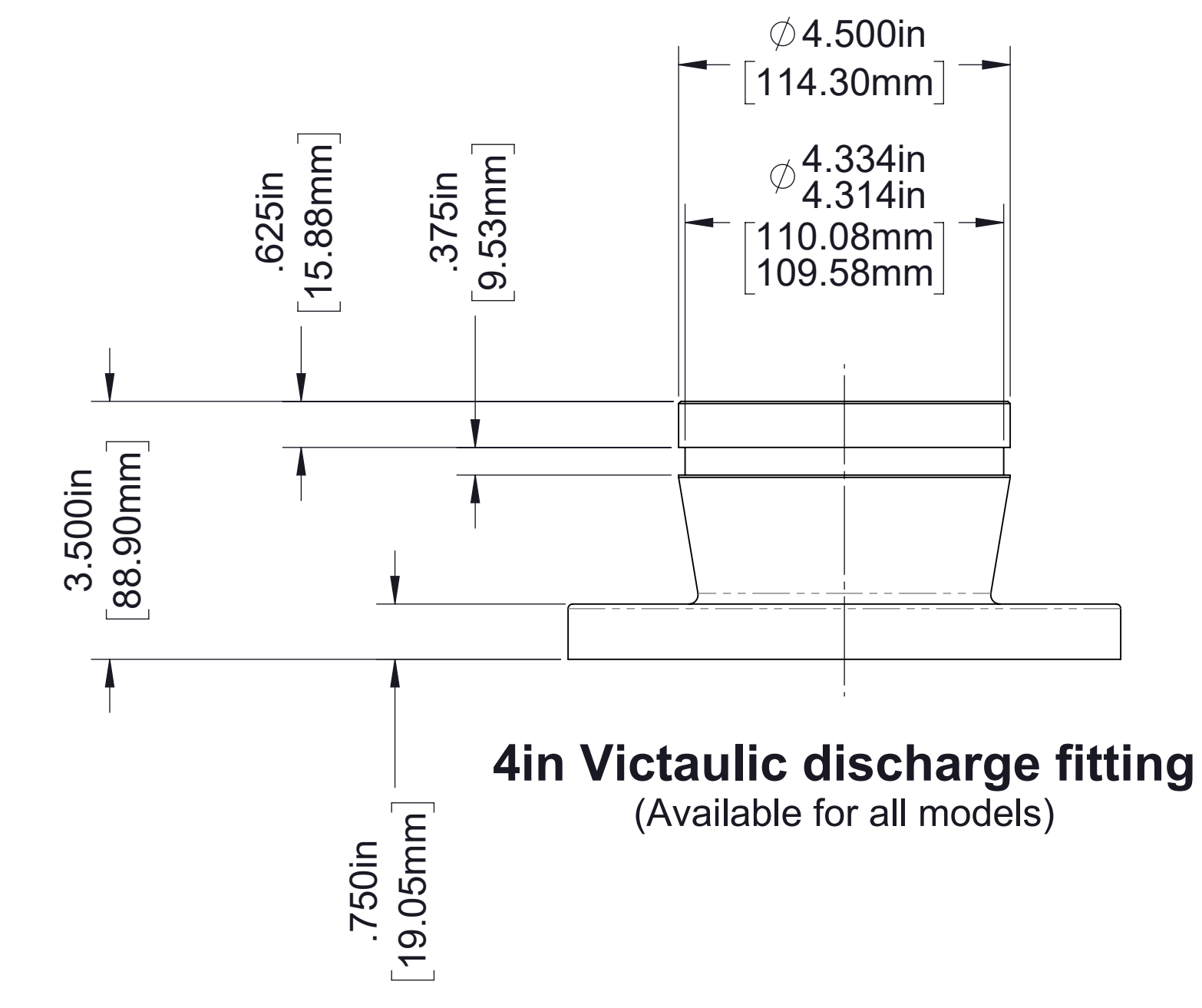
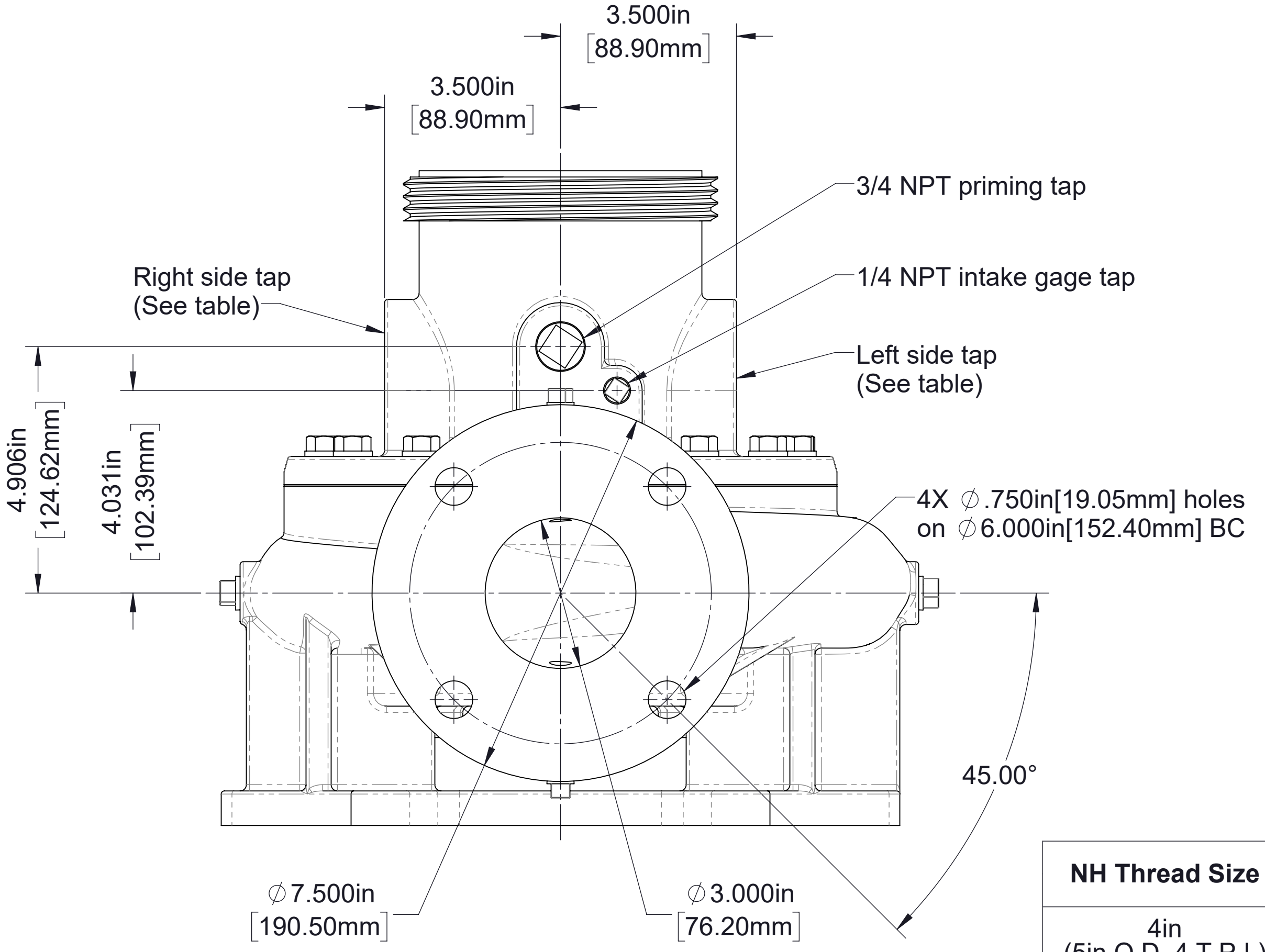
Transmission			Pump					See Page			
Type	Driveline	Pump Mounting on Transmission	Input Rotation (1)	Impeller Rotation (2)	Pump and Transmission Model			Pump and Transmission			
					CGV	CGVR	CGVG	Dimensions		Available	
								CGV/CGVR	CGVG	Pump Discharge Positions	Transmission Mounting Positions
<b>C22 Series</b> Chain Drive, Split Shaft	Input and Output Shaft	Front (Input Shaft) Side	CW	CW	CGVC22B CGVC22C CGVC22D CGVC22E CGVC22F	N/A	CGVGC22B CGVGC22C CGVGC22D CGVGC22E CGVGC22F	6, 8	6, 8	12	14
	Input Shaft Only	Front (Input Shaft) Side	CW	CW				7, 8	7, 8	12	14
<b>K Series</b> Two Gear, PTO Driven	Input Shaft Only	Opposite Input Shaft	CW	CW	CGVK	CGVRK	CGVGK	9	9	12	13
			CCW	CCW	CGVK	CGVRK	N/A	9	N/A	12	13
<b>T Series</b> Two Gear, Direct Engine Mount	Input Shaft Only	Opposite Input Shaft	CW	CW	CGVT	CGVRT	N/A	10	N/A	12	13
			CCW	CCW	CGVT	CGVRT	N/A	10	N/A	12	13
<b>P Series</b> Chain Drive, PTO Driven	Input Shaft Only	Input Shaft Side	CW	CW	CGVPA	N/A	CGVGPA	11	11	12	14

Notes:

1. Input rotation is viewed looking directly at the transmission input shaft.
2. Impeller rotation is viewed looking directly at the intake fitting (impeller eye).

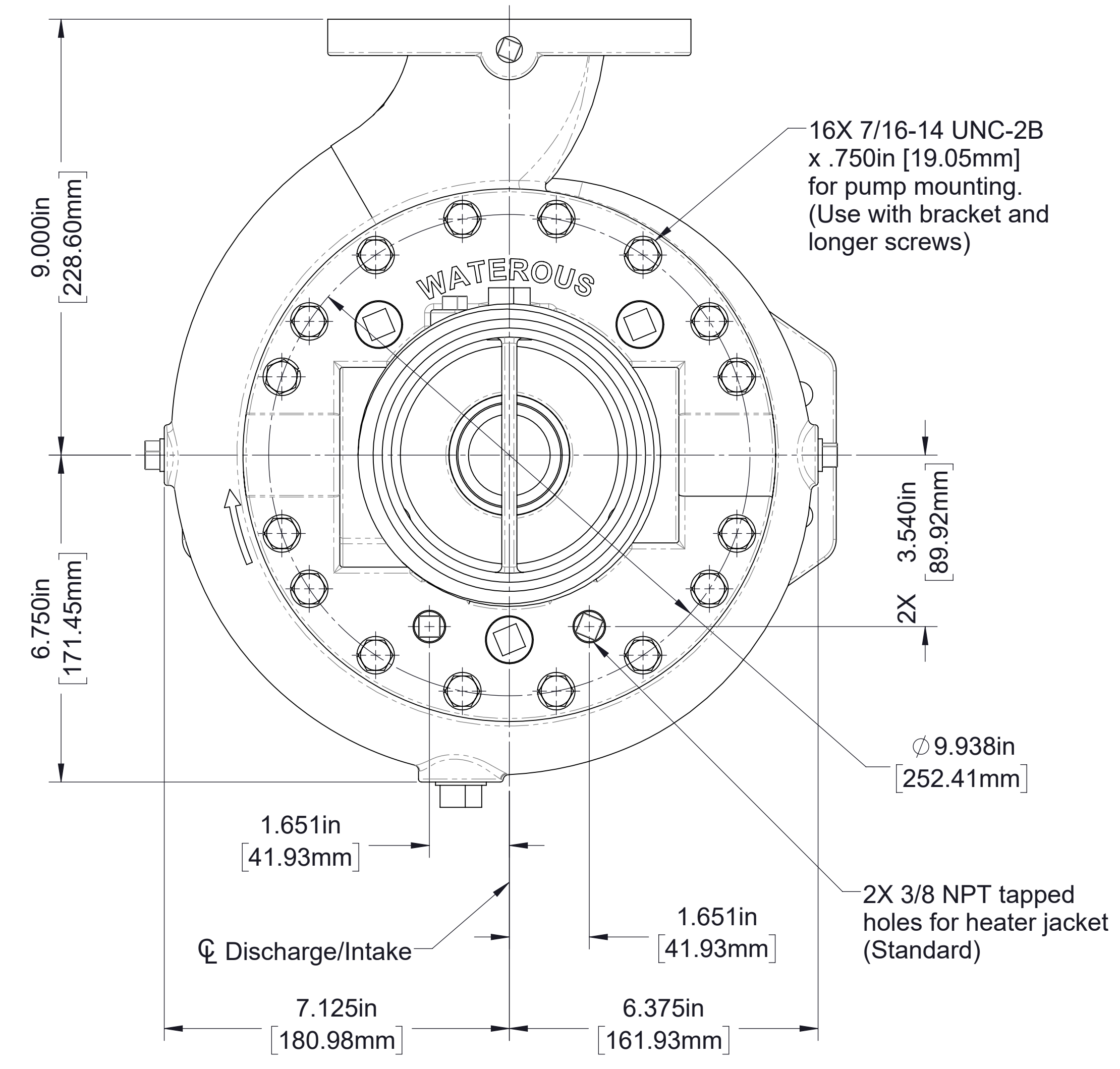
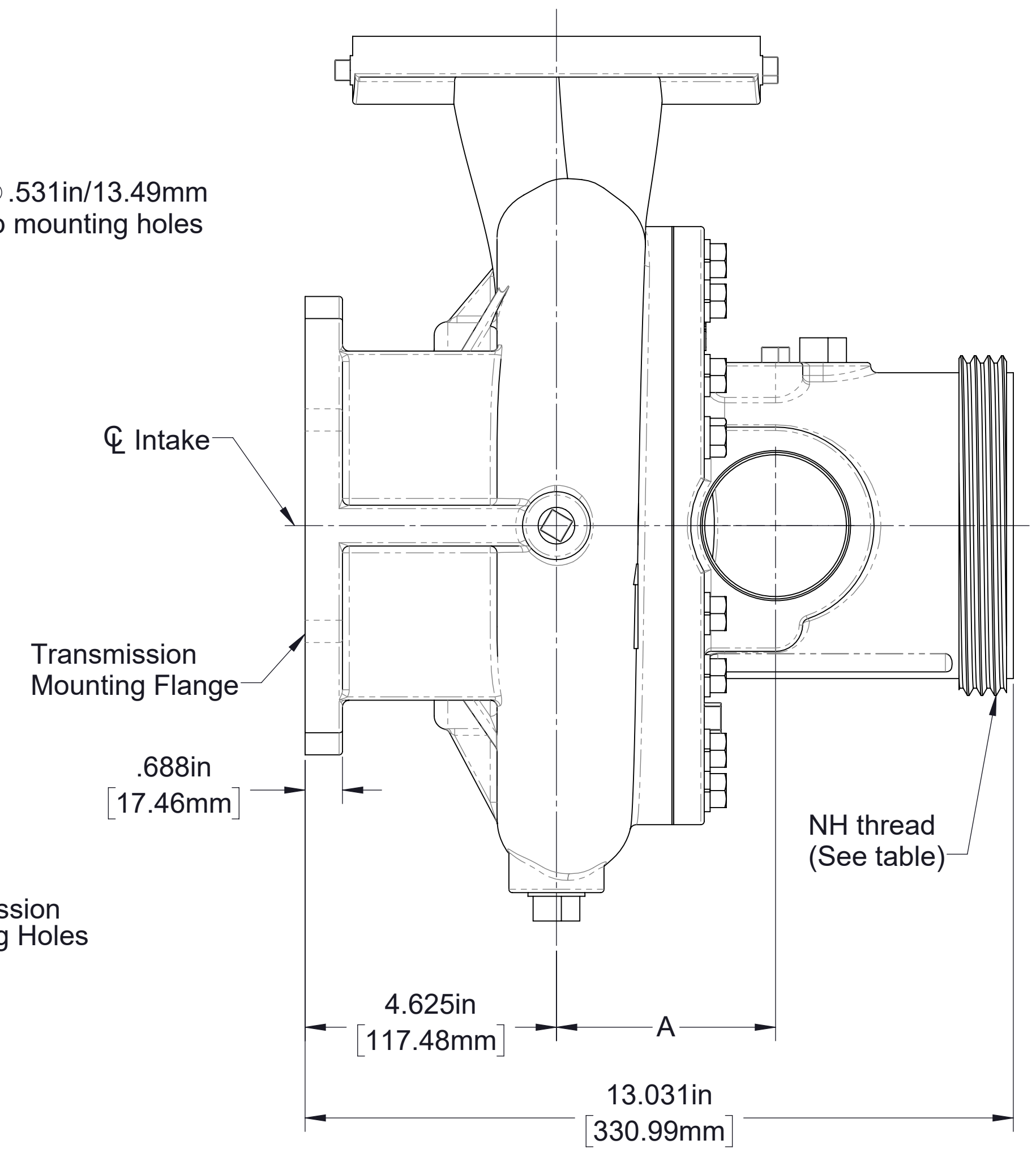
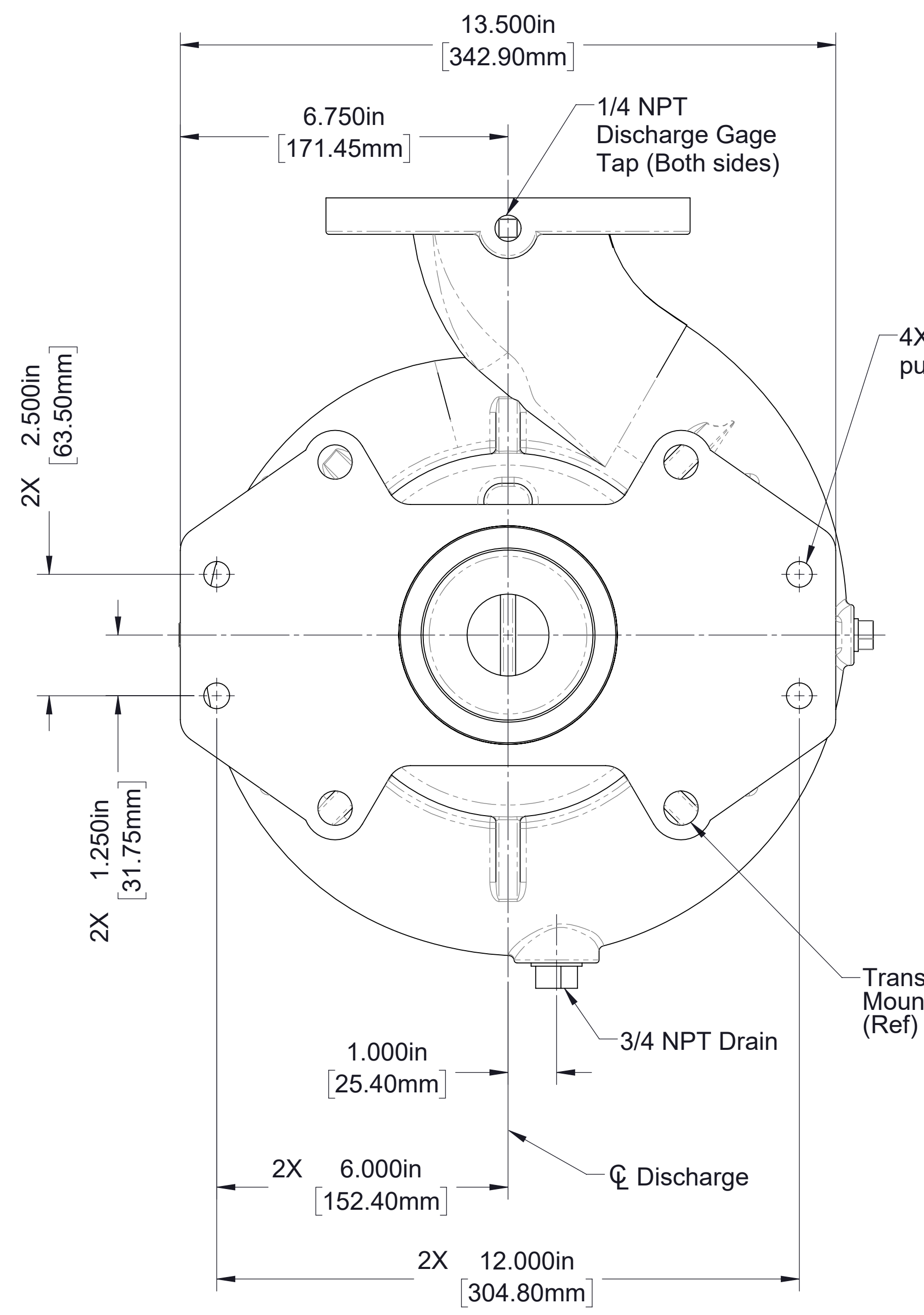


**CGV Body Dimensions**  
CW Impeller Rotation Shown

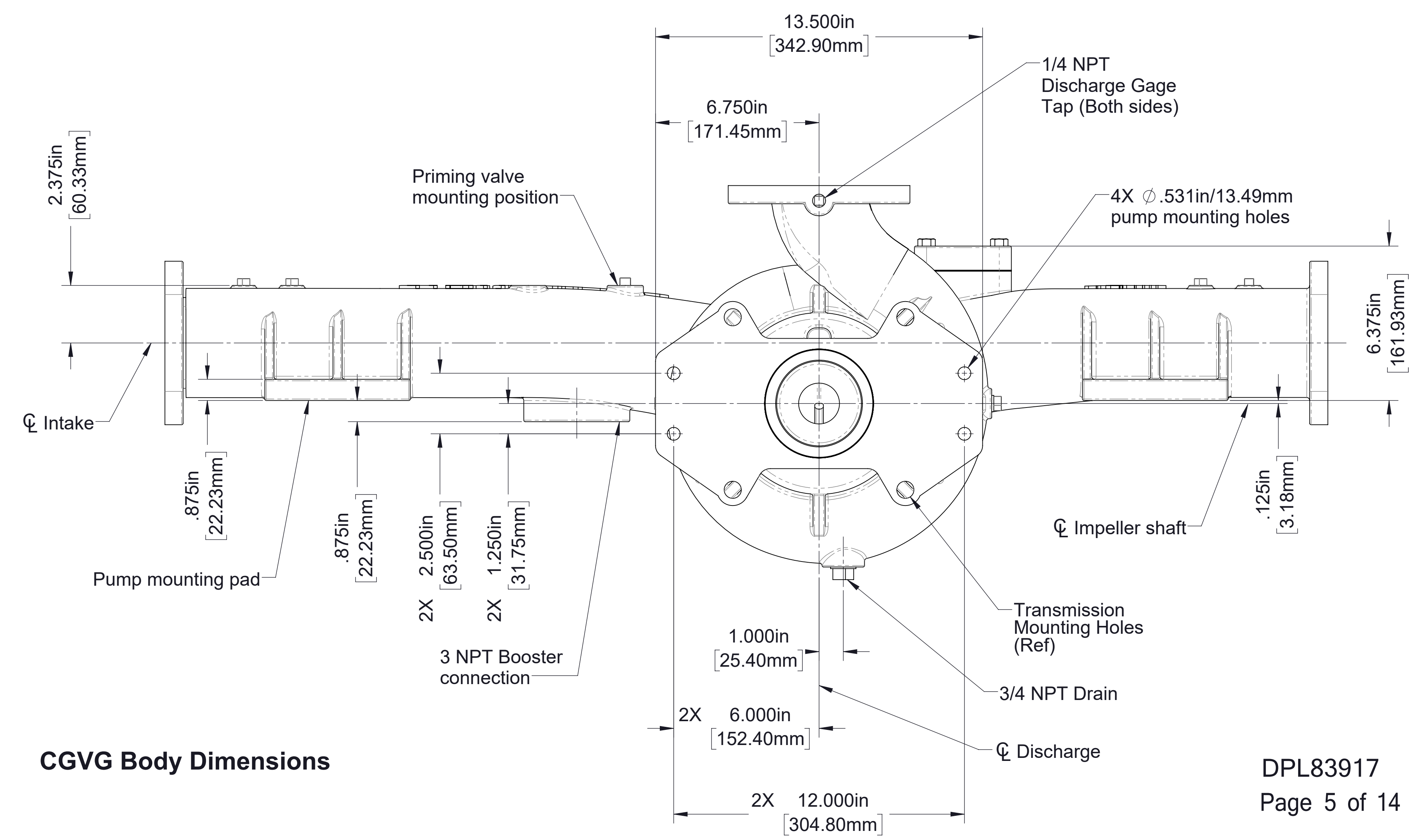
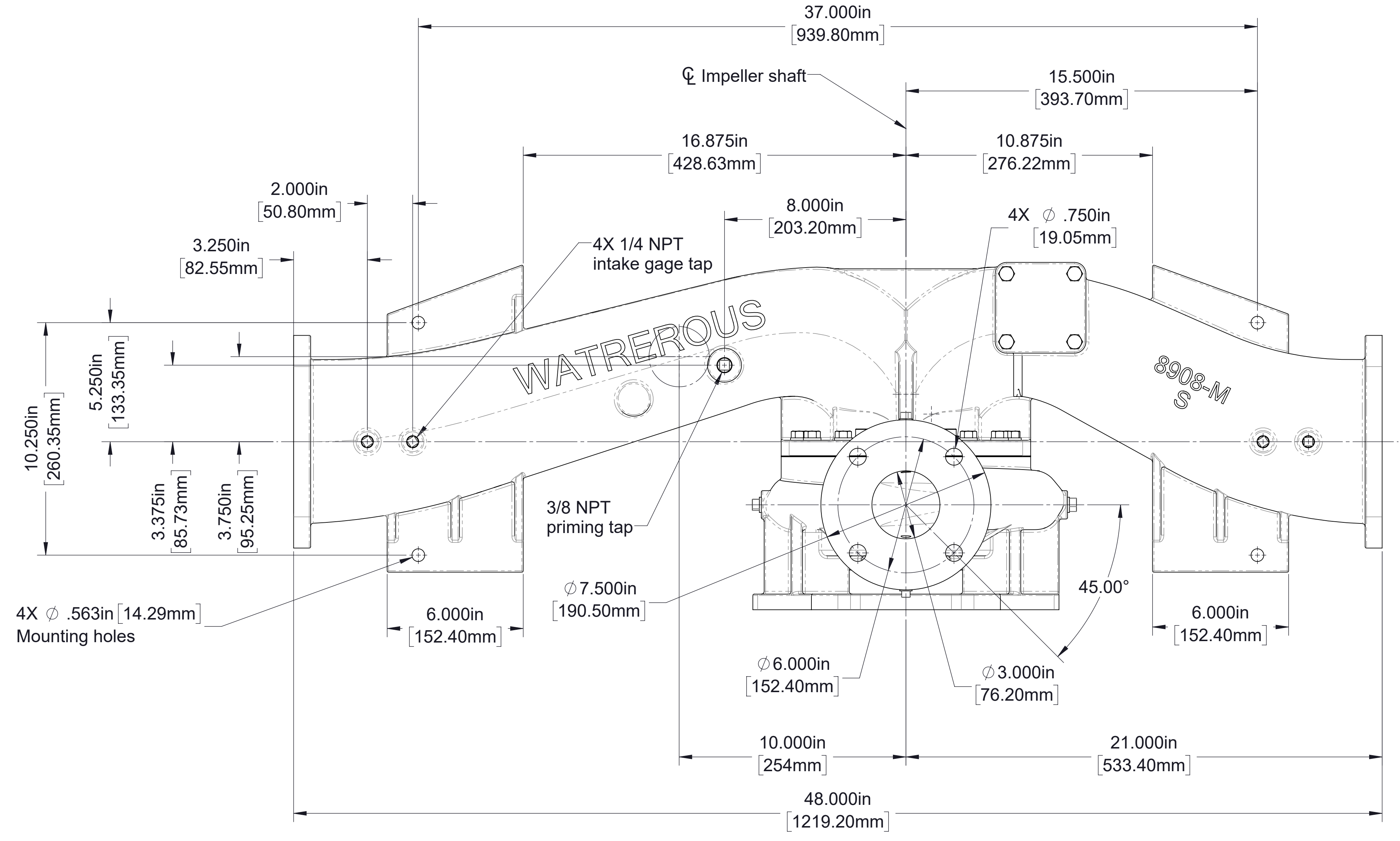
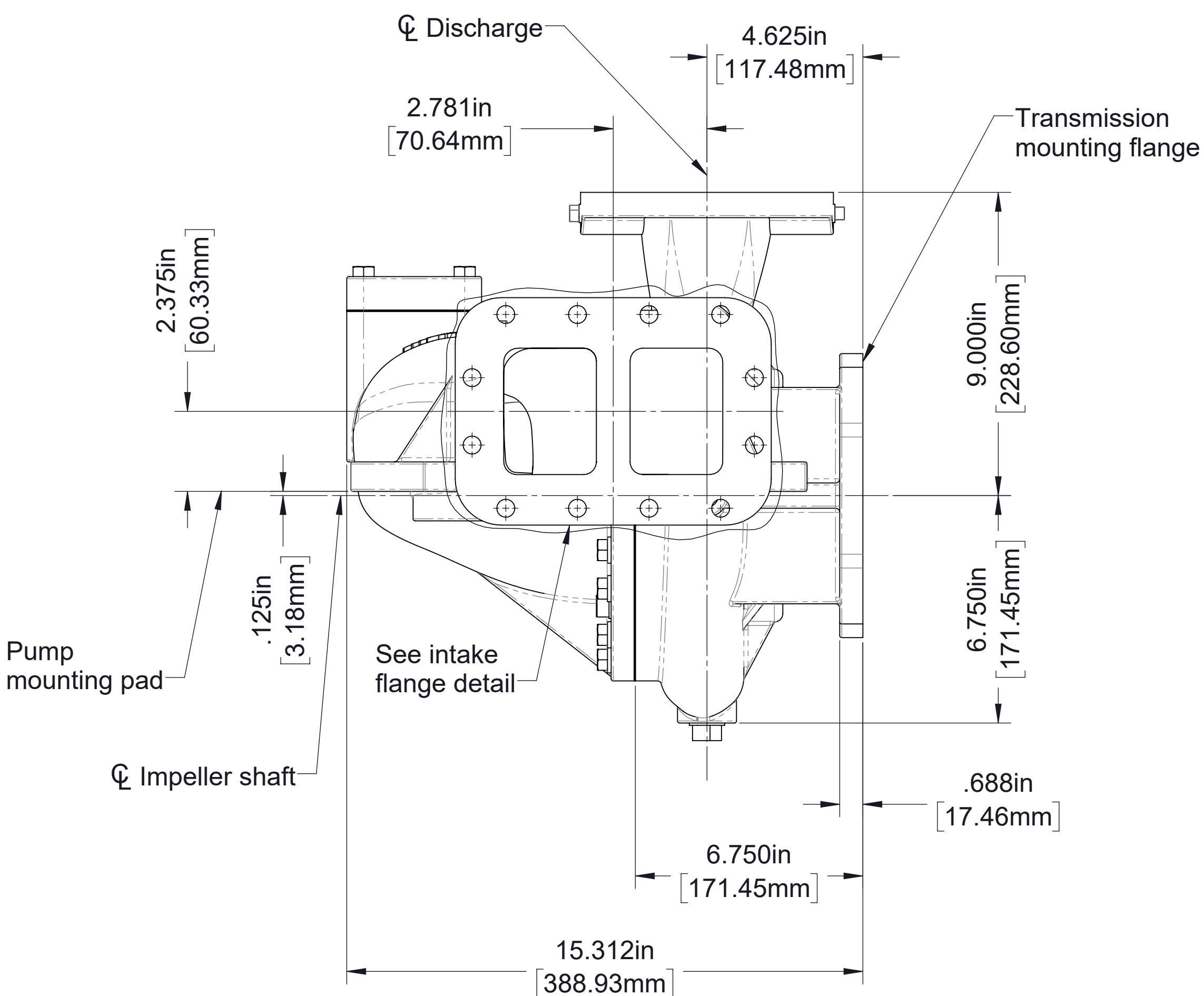
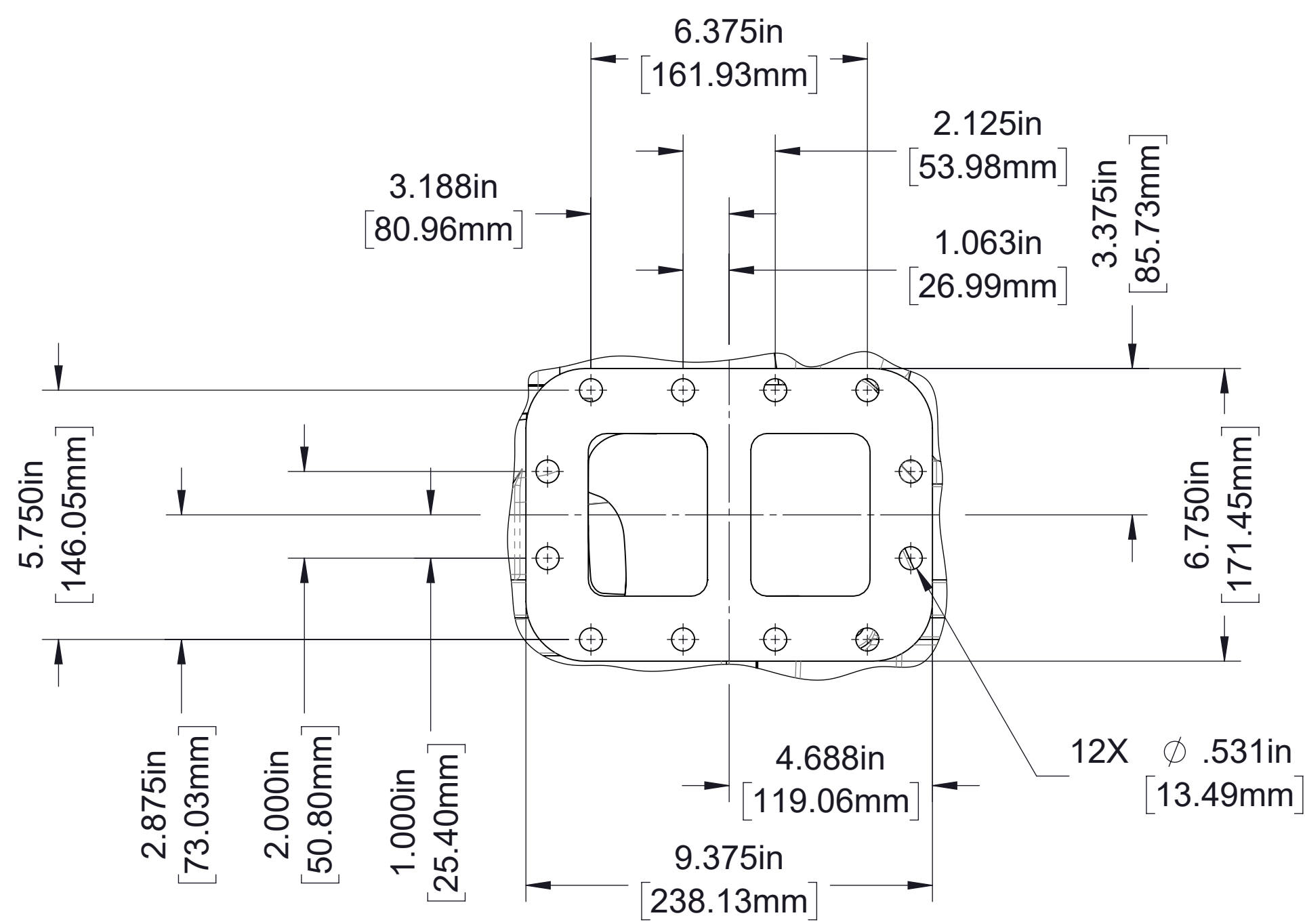
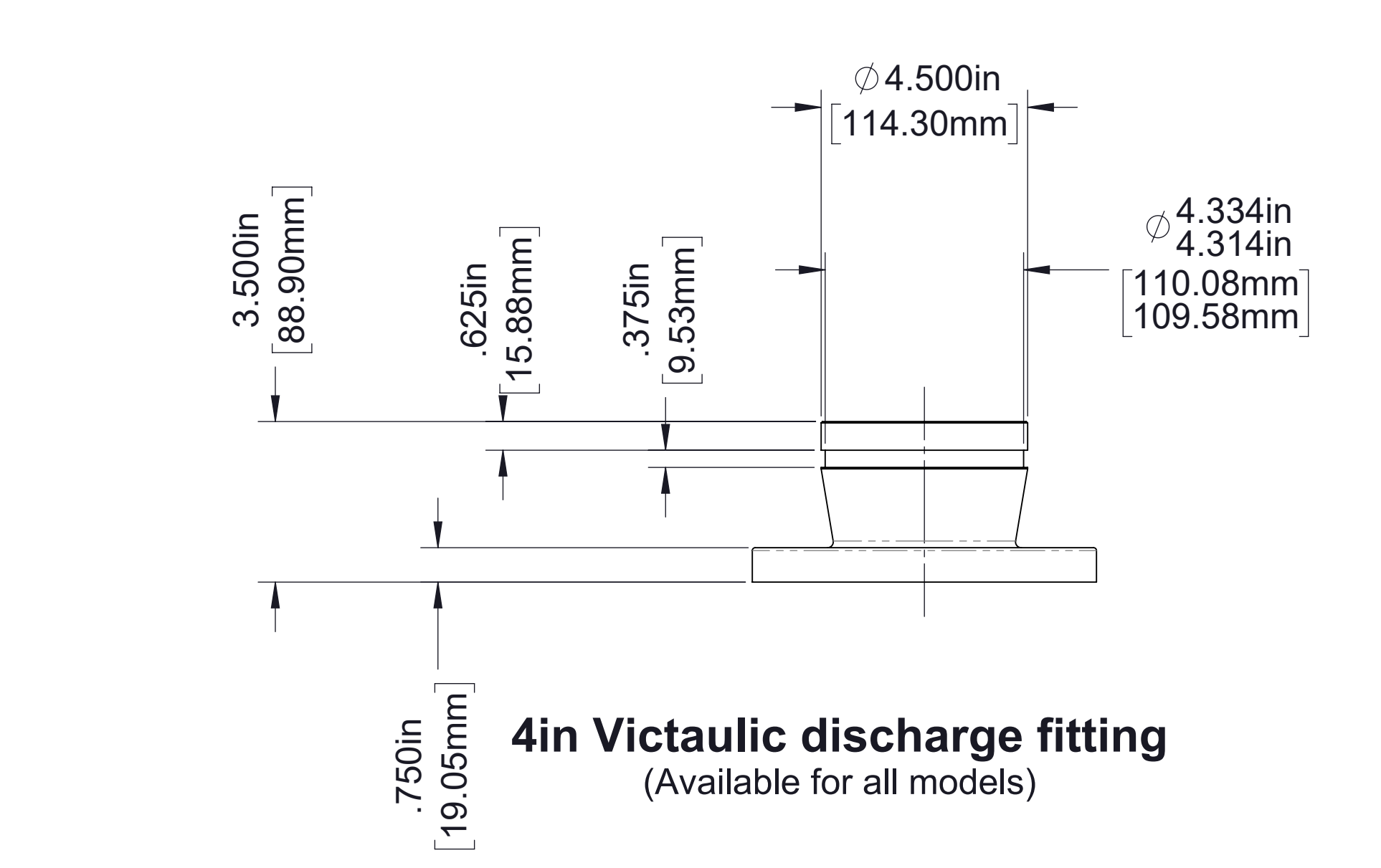


**4in Victaulic discharge fitting**  
(Available for all models)

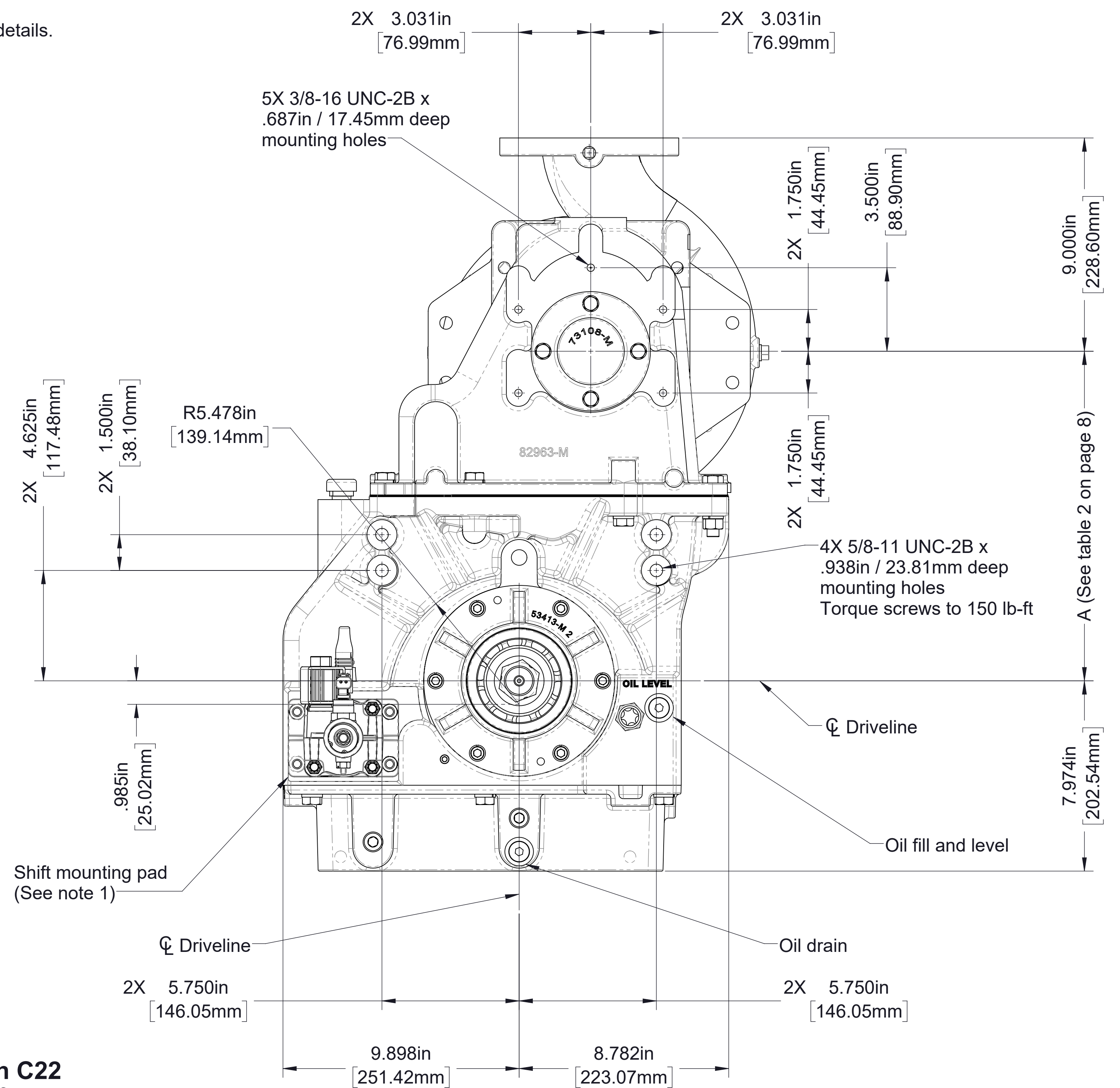
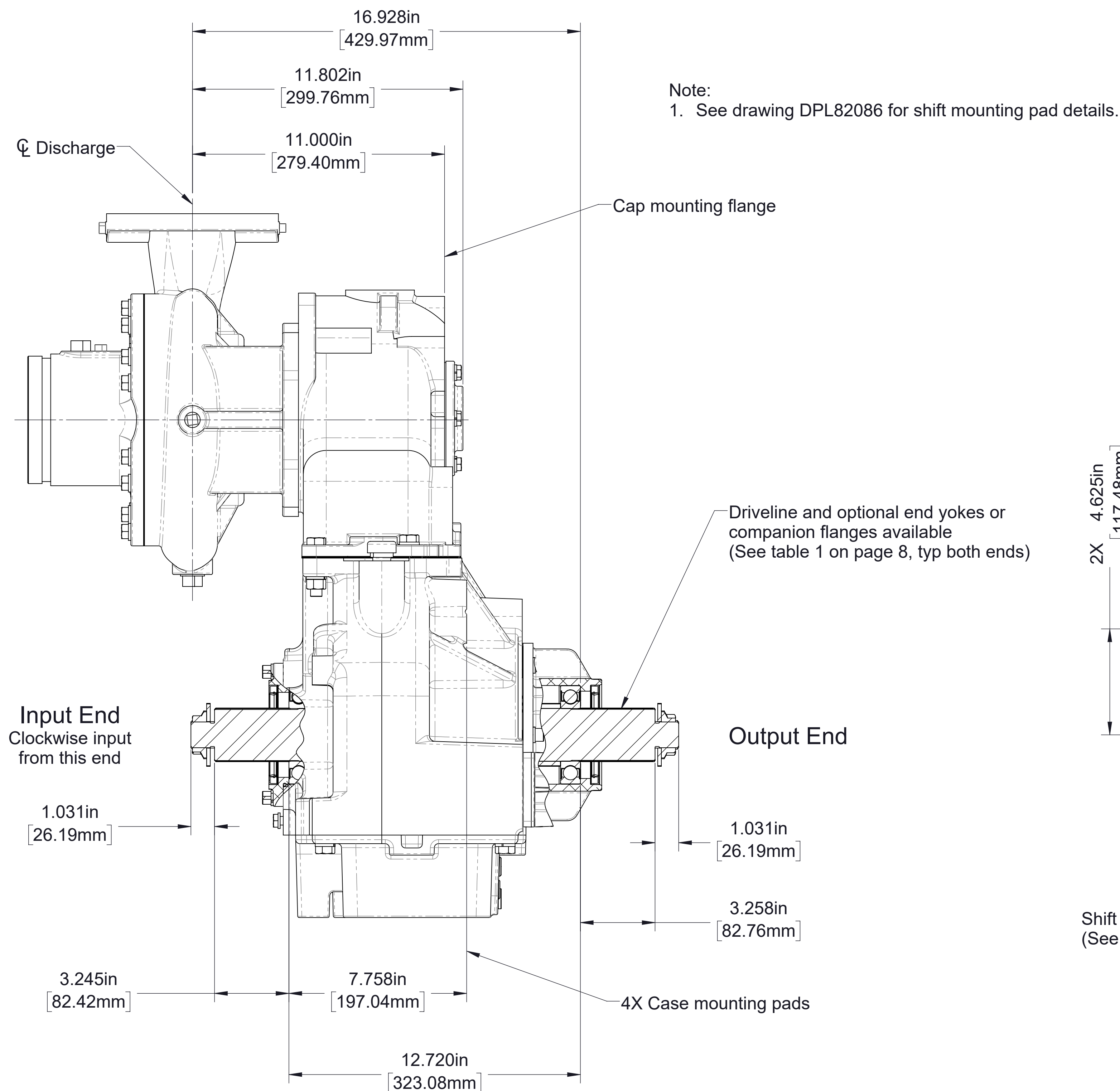
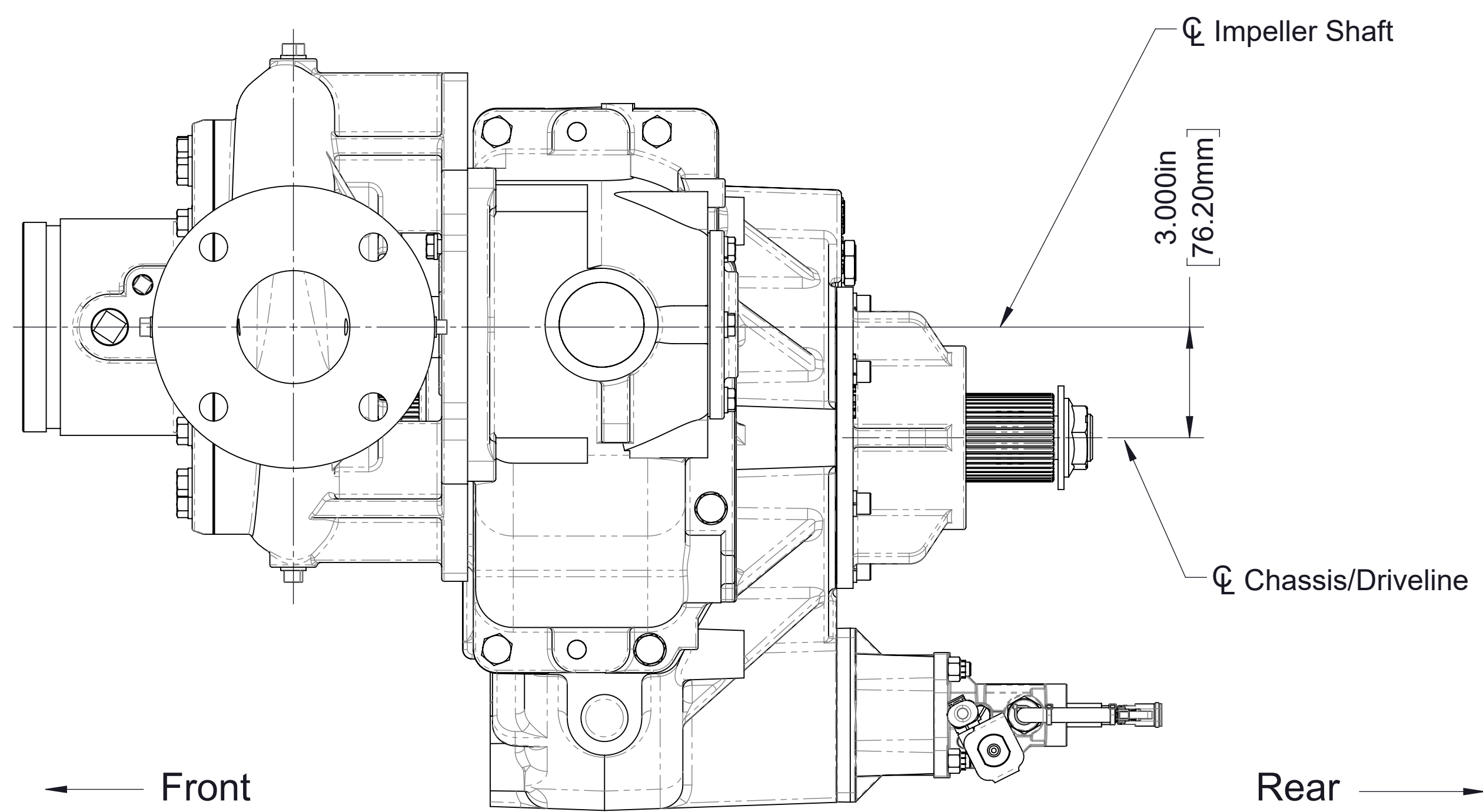
NH Thread Size	Side Taps		Dim A
	Left Side	Right Side	
4in (5in O.D. 4 T.P.I.)	2-1/2 NPT	2-1/2 NPT	4.000in (101.60mm)
4-1/2in (5.75in O.D. 4 T.P.I.)	2-1/2 NPT	2-1/2 NPT	4.375in (111.13mm)
	3 NPT	3 NPT	4.375in (111.13mm)
5in (6.25in O.D. 4 T.P.I.)	2-1/2 NPT	2-1/2 NPT	4.000in (101.60mm)



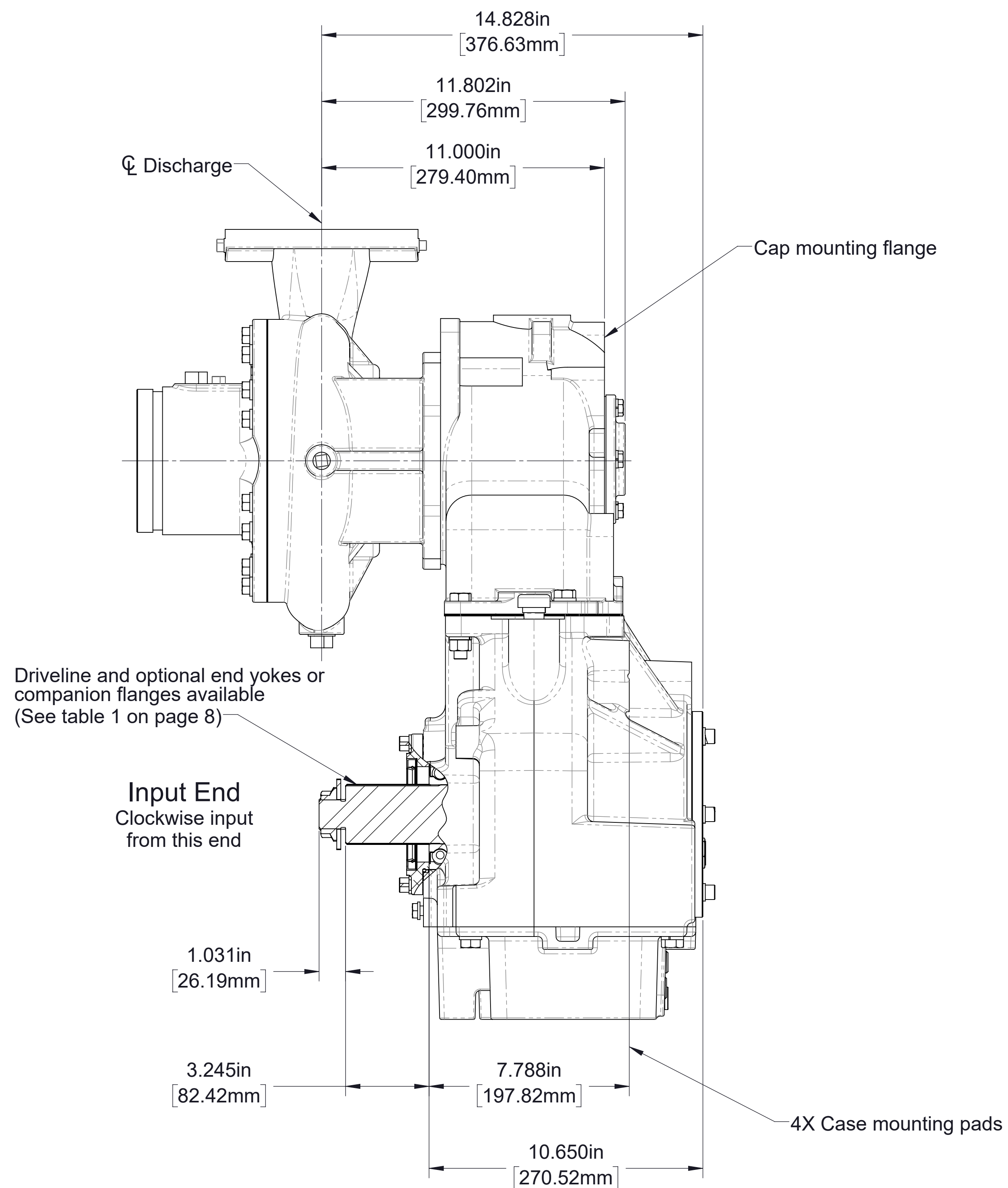
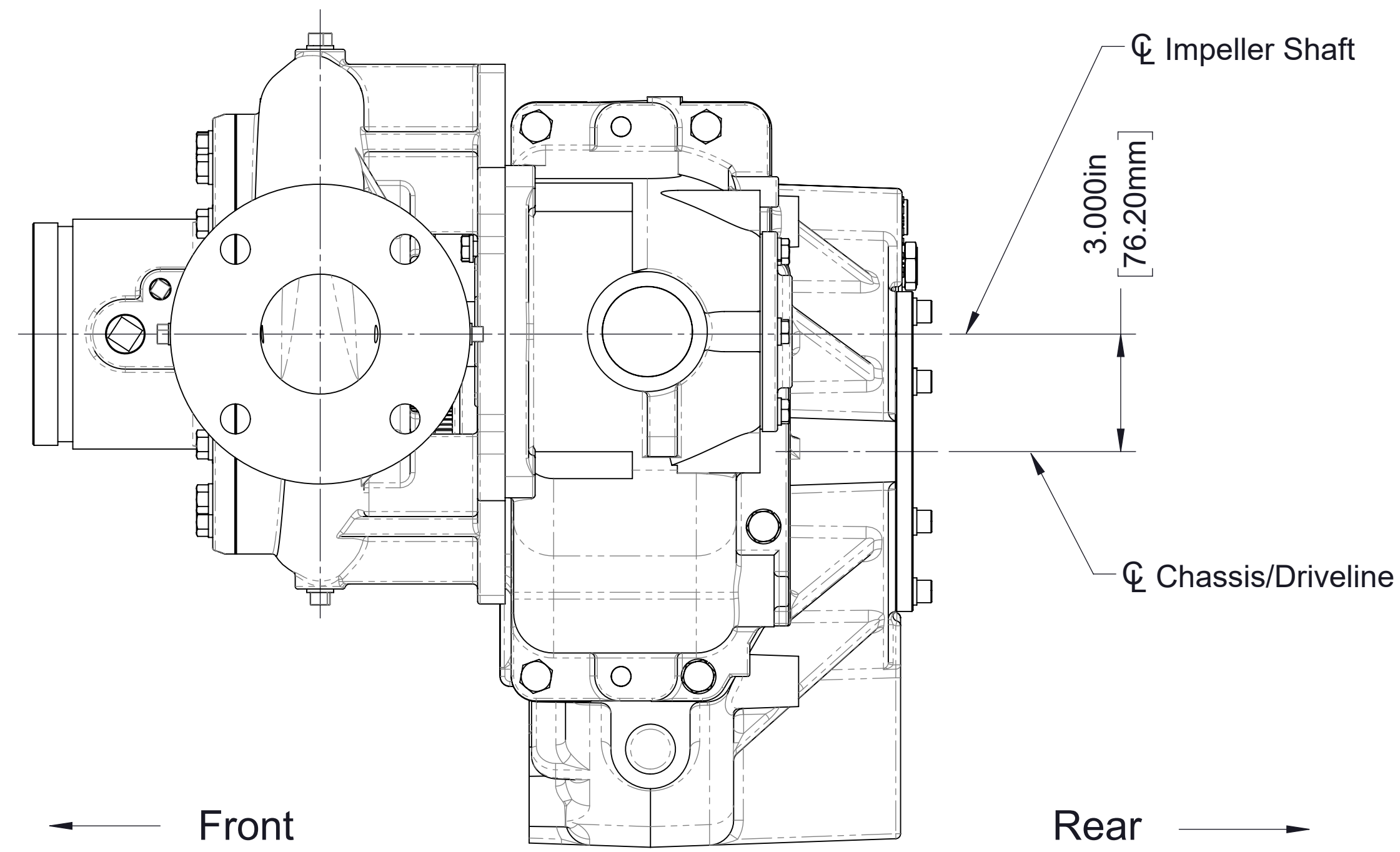
**CGVR Body Dimensions**  
CW Impeller Rotation Shown



**CGVG Body Dimensions**



**CG Pump Series with C22**  
 Input and Output Shaft  
 Pump mounted on front (Input shaft side) of transmission  
 Clockwise input, model CGVC22C, 2.27 ratio, blank discharge shown



**CG Pump Series with C22**  
 Input Shaft Only  
 Pump mounted on front (Input shaft side) of transmission  
 Clockwise input, model CGVC22C, 2.27 ratio, blank discharge shown

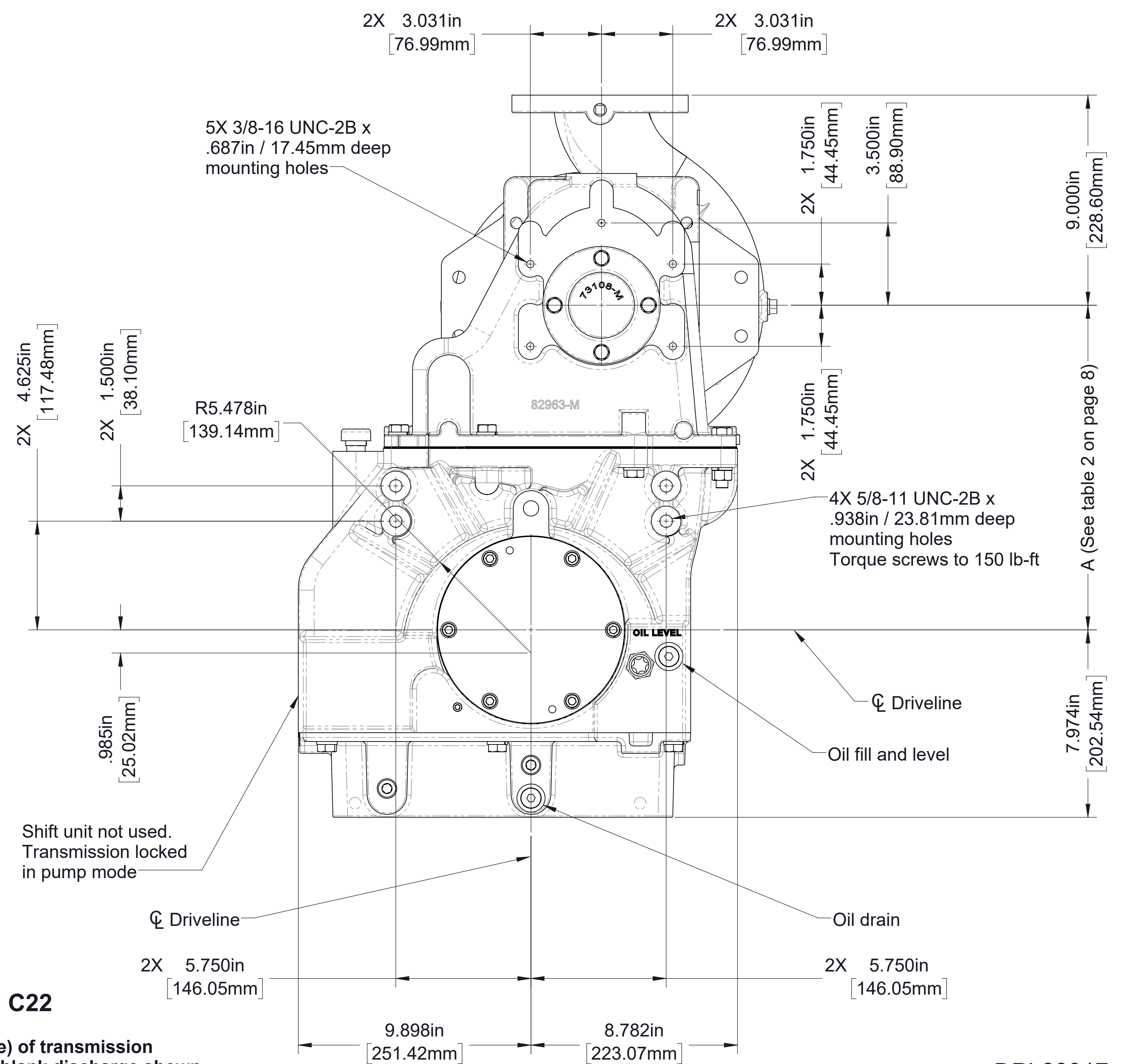
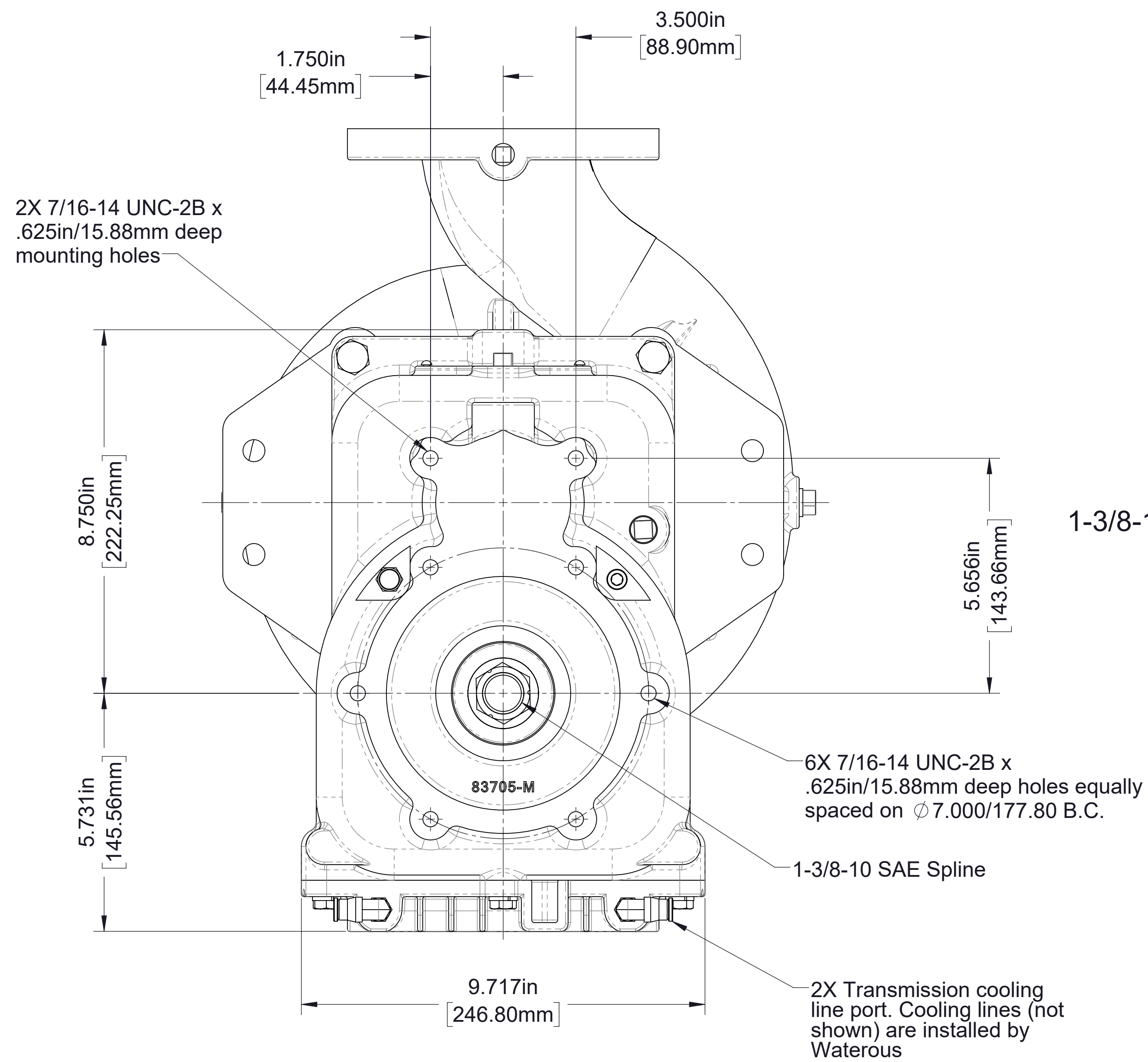


Table 1 - Available Driveline/Models						
Driveline			Optional End Yokes Available from Waterous			Companion Flange
Type	Size	Spline	Yoke		Cross and Bearing Kit	
			Spicer Series	Part No.		
Extra Heavy Duty	2.35 Inch	2.35-46T Involute	1480/1610	--	--	V 3719
			1650/1710	--	--	V 3619
			1710 BP	V 2837	V 2839	--
			1810 BP	V 2838	V 2840	--
			1710 HR	V 4101	--	--
			1810 HR	V 4102	--	--
			SPL140	V 3388	V 3389	--

Table 2 - Available Ratios					
Dimension A					
Drive to Driven Ratio	All dimensions shown as inch/millimeter				
	C22B	C22C	C22D	C22E	C22F
1.27	12.250/311.15	14.312/363.52	14.825/376.56	16.861/428.27	18.892/479.86
1.41	11.840/300.74	13.899/353.03	14.931/379.25	16.971/431.06	19.002/482.65
1.48	12.326/313.08	13.878/352.50	14.907/378.64	16.951/430.56	18.981/482.12
1.58	12.205/310.01	13.756/349.40	14.788/375.62	16.830/427.48	18.861/479.07
1.69	12.290/312.17	13.839/351.51	14.876/377.85	16.923/429.84	18.961/481.61
1.79	11.958/303.73	14.045/356.74	15.072/382.83	17.127/435.03	19.168/486.87
1.88	12.129/308.08	13.690/347.73	14.717/373.81	16.773/426.03	18.809/477.75
1.97	12.306/312.57	13.870/352.30	14.912/378.76	16.970/431.04	19.012/482.90
2.03	11.896/302.16	13.984/355.19	15.028/381.71	17.086/433.98	19.132/485.95
2.27	12.240/310.90	13.811/350.80	14.856/377.34	16.920/429.77	18.971/481.86
2.46	11.941/303.30	14.042/356.67	15.087/383.21	17.154/435.71	19.205/487.81
2.68	12.169/309.09	13.746/349.15	14.793/375.74	16.865/428.37	18.923/480.64

**C22 Data Tables**

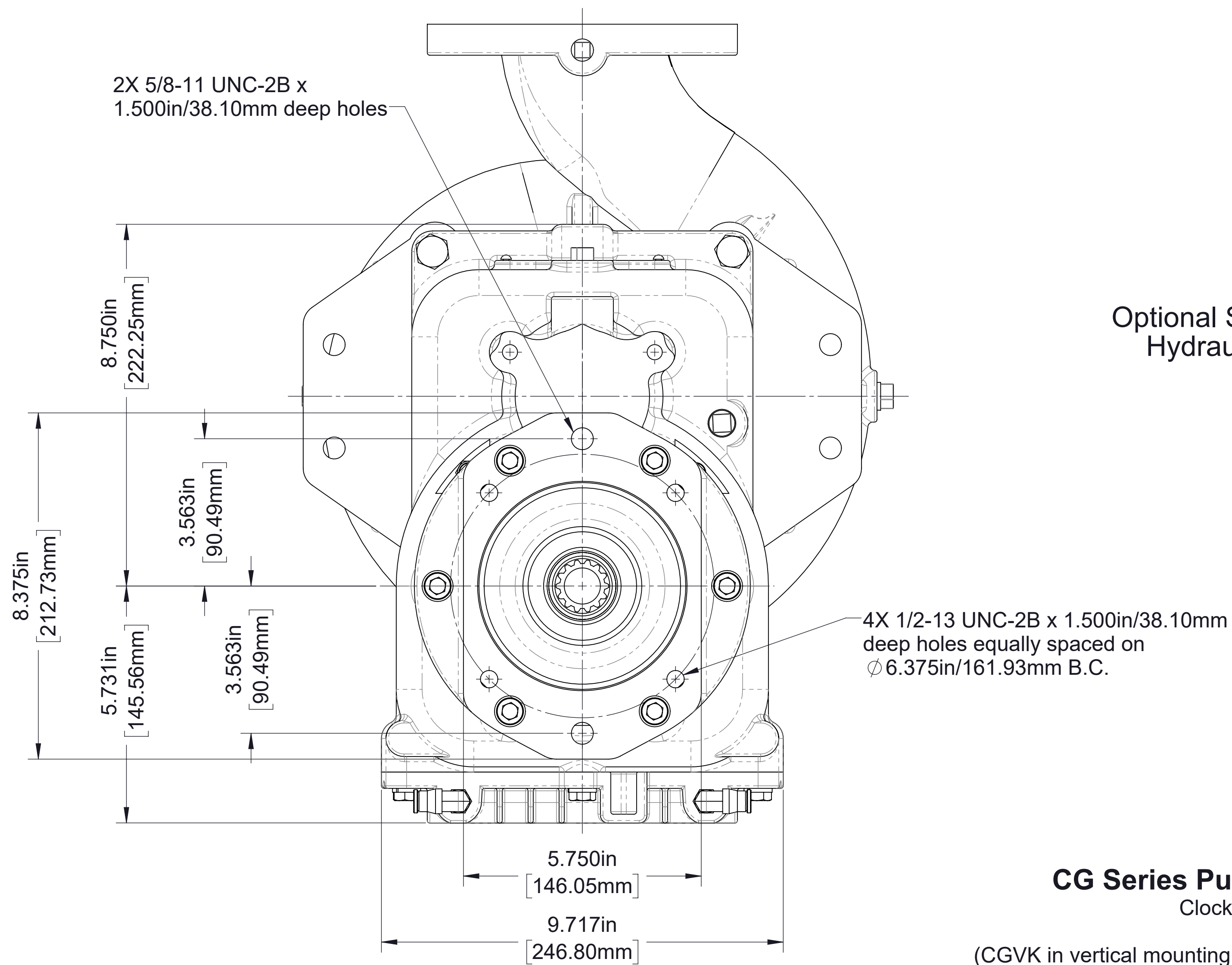
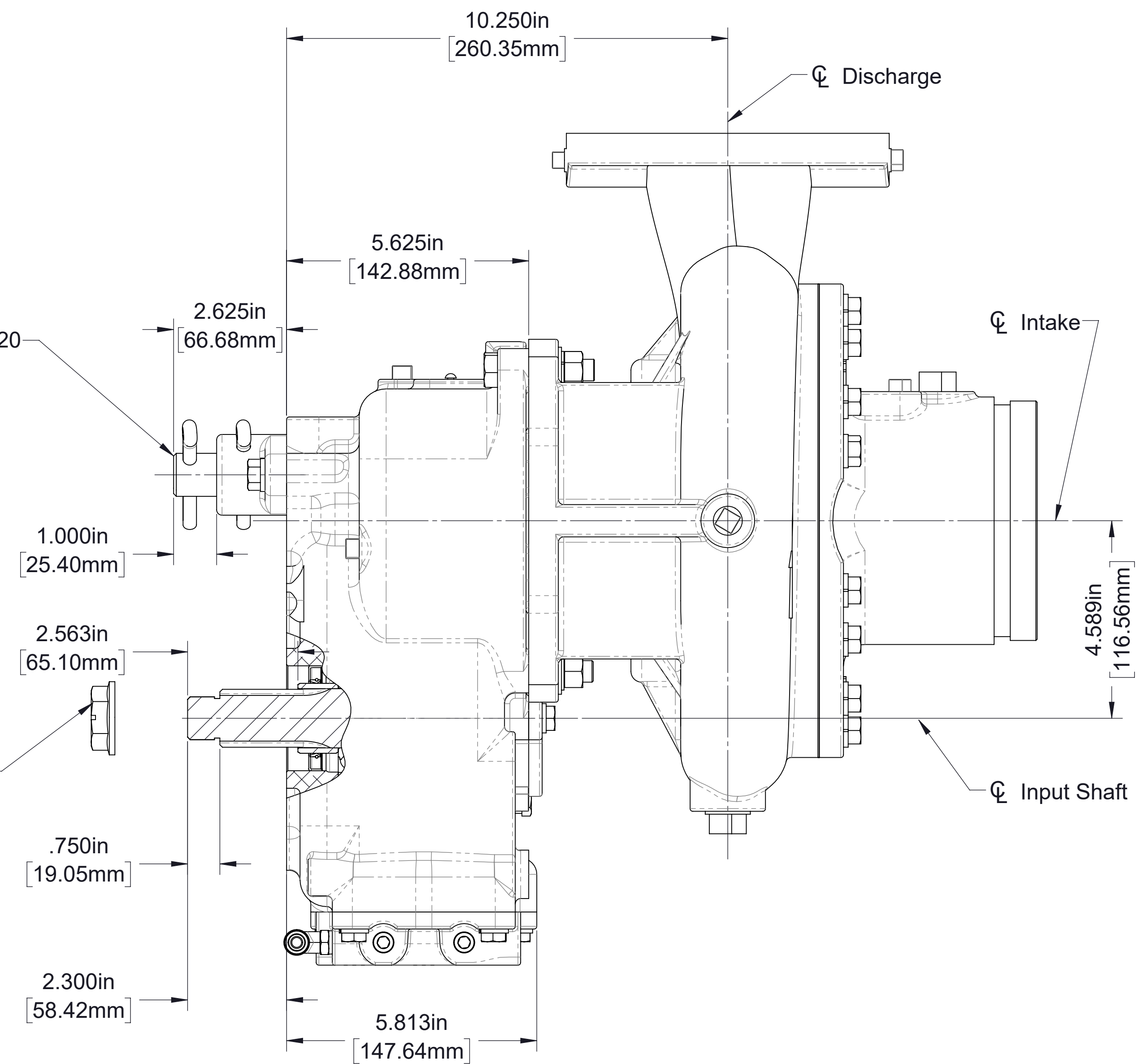




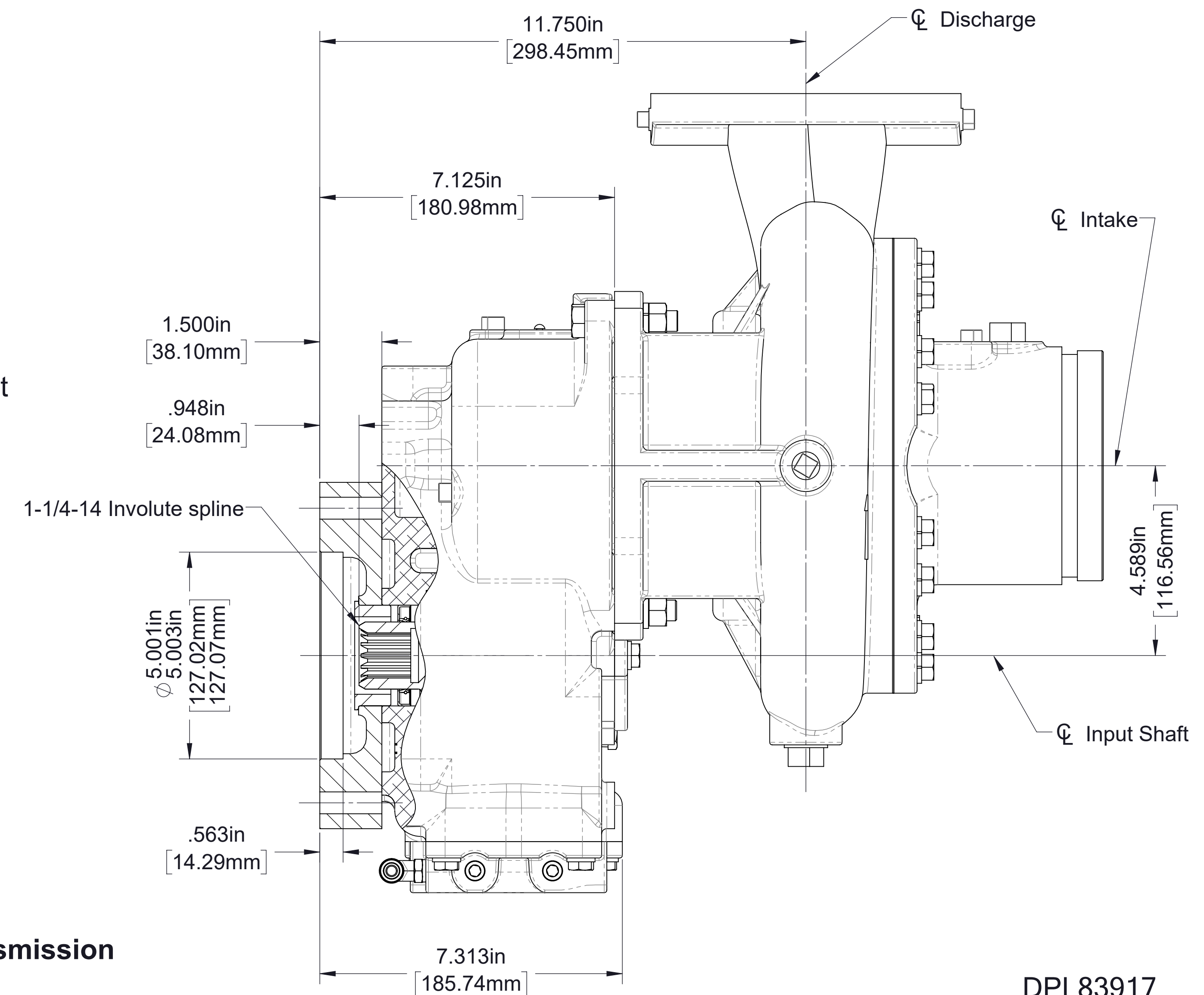
1-3/8-10 SAE Splined Input

Optional  $\varnothing 1.000/25.4$ mm suspension pin. Order kit K520

1-20 Shaft Nut, Included on drive shaft. Torque to 275-325 Lb-Ft



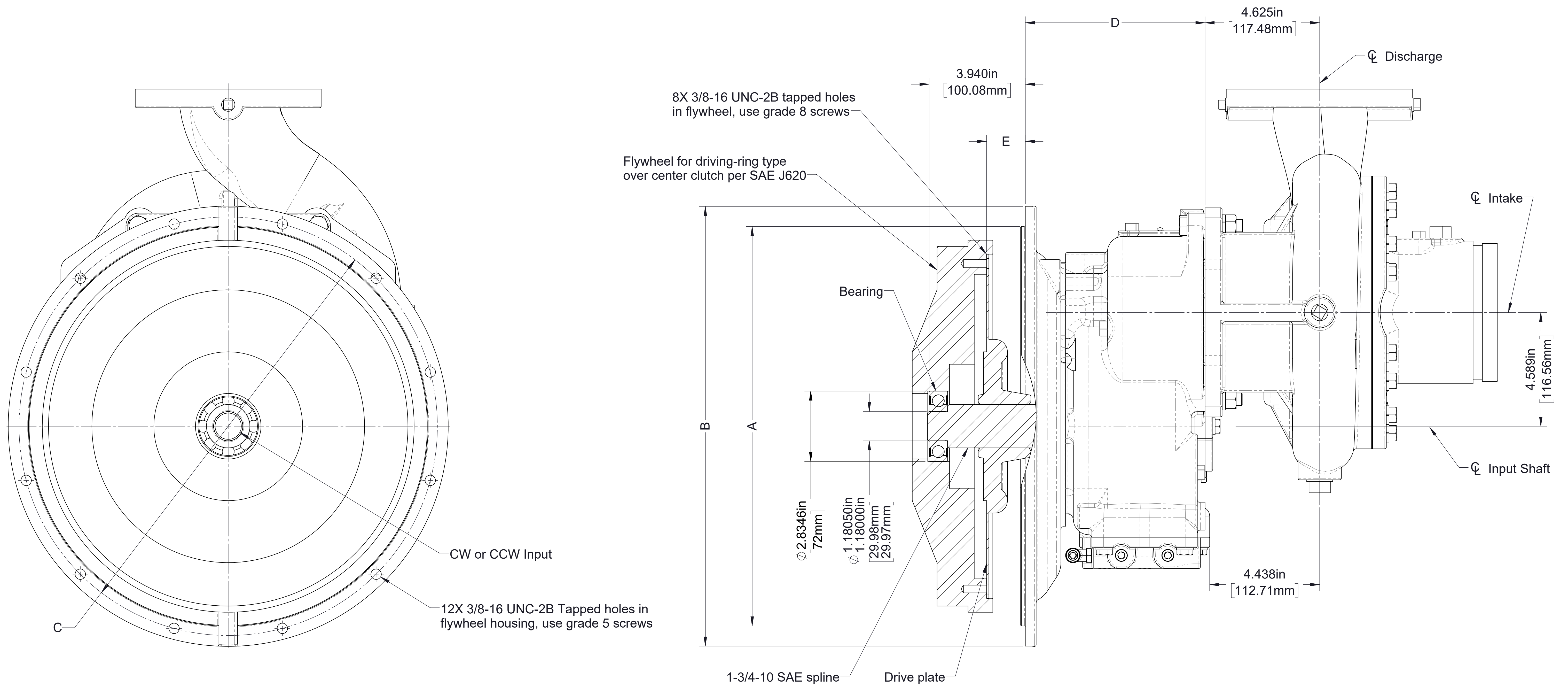
Optional SAE Class "C" 2 or 4 Bolt Hydraulic Pump Flange Input



**CG Series Pump with K Series Transmission**

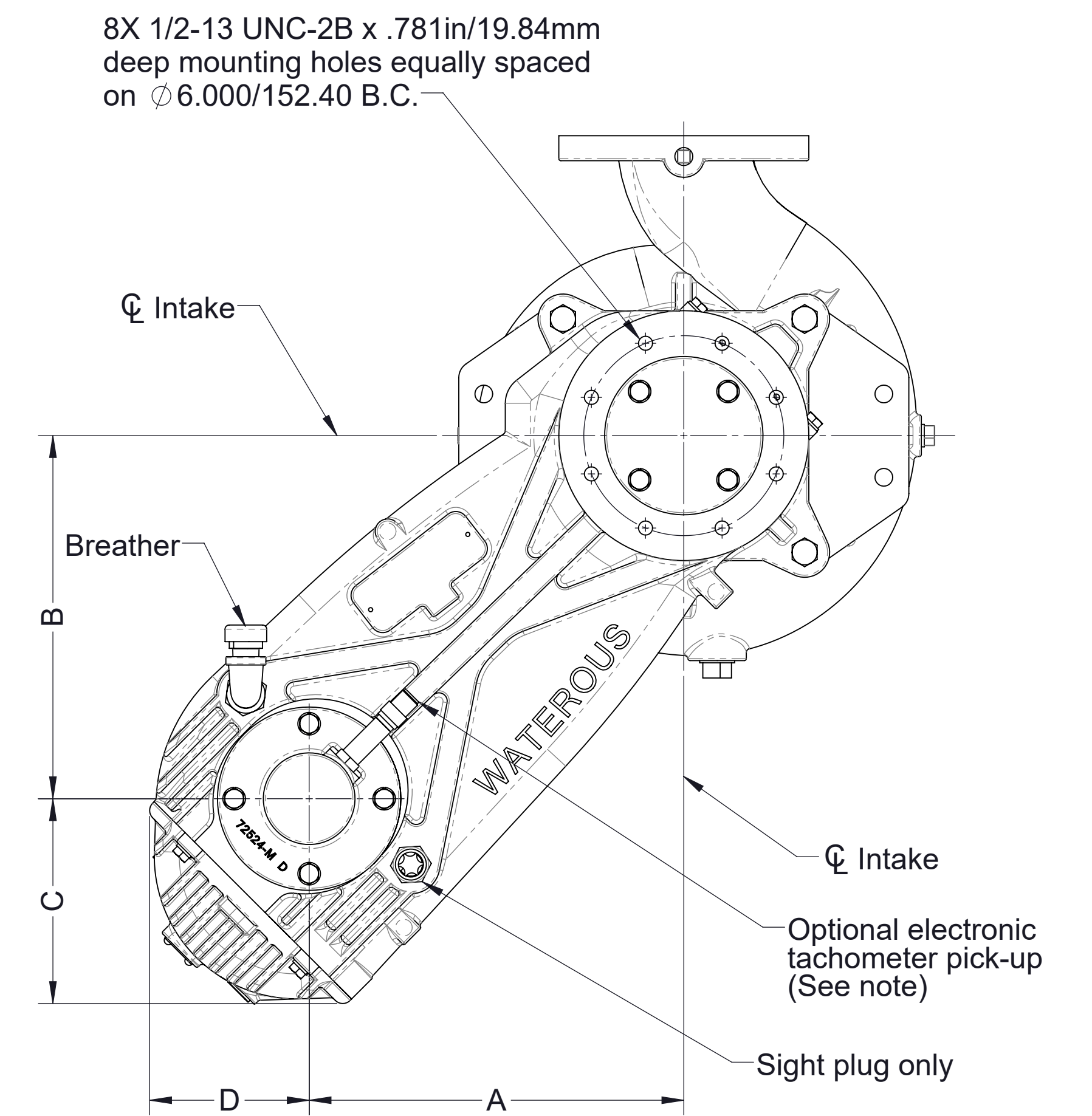
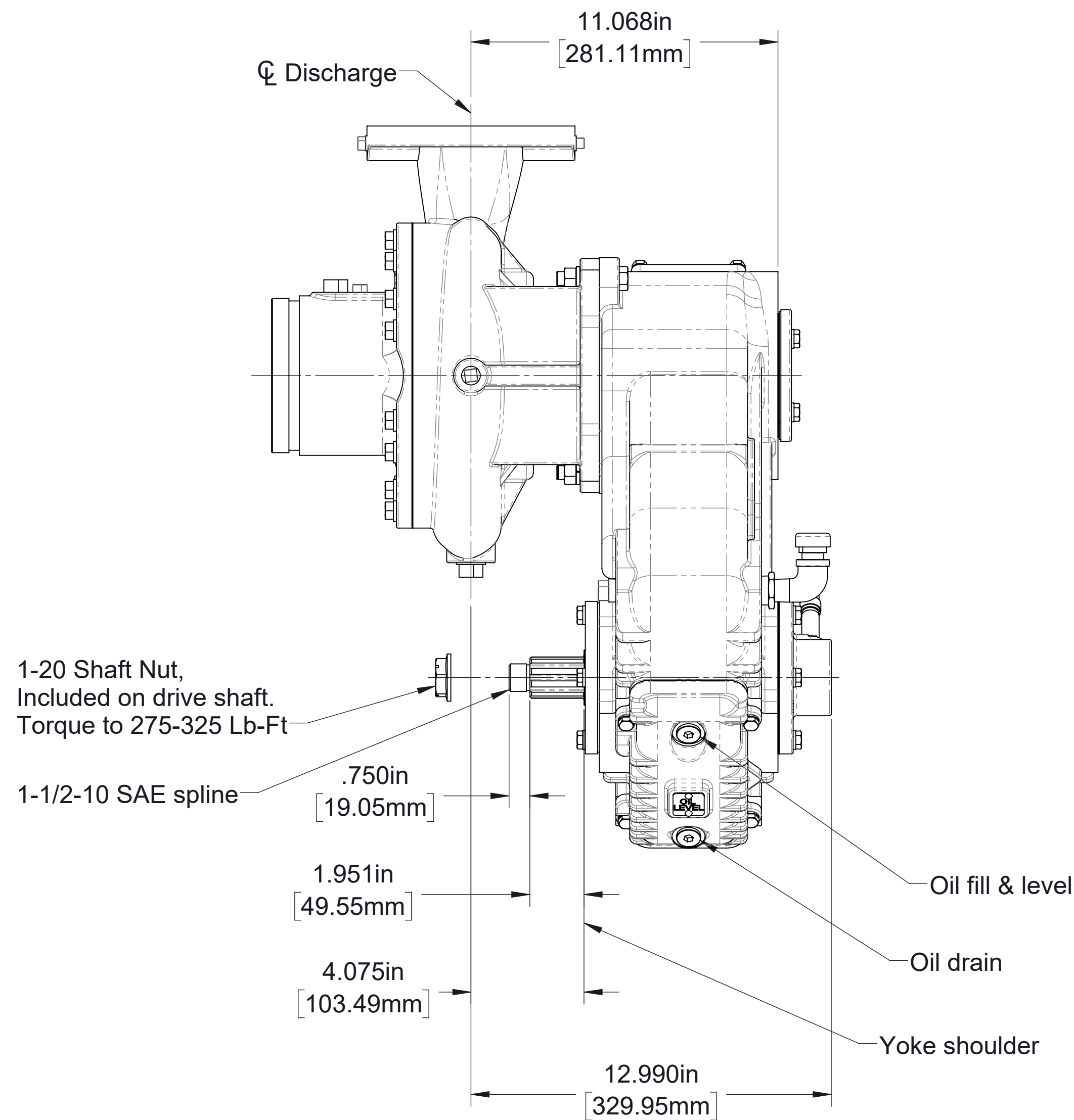
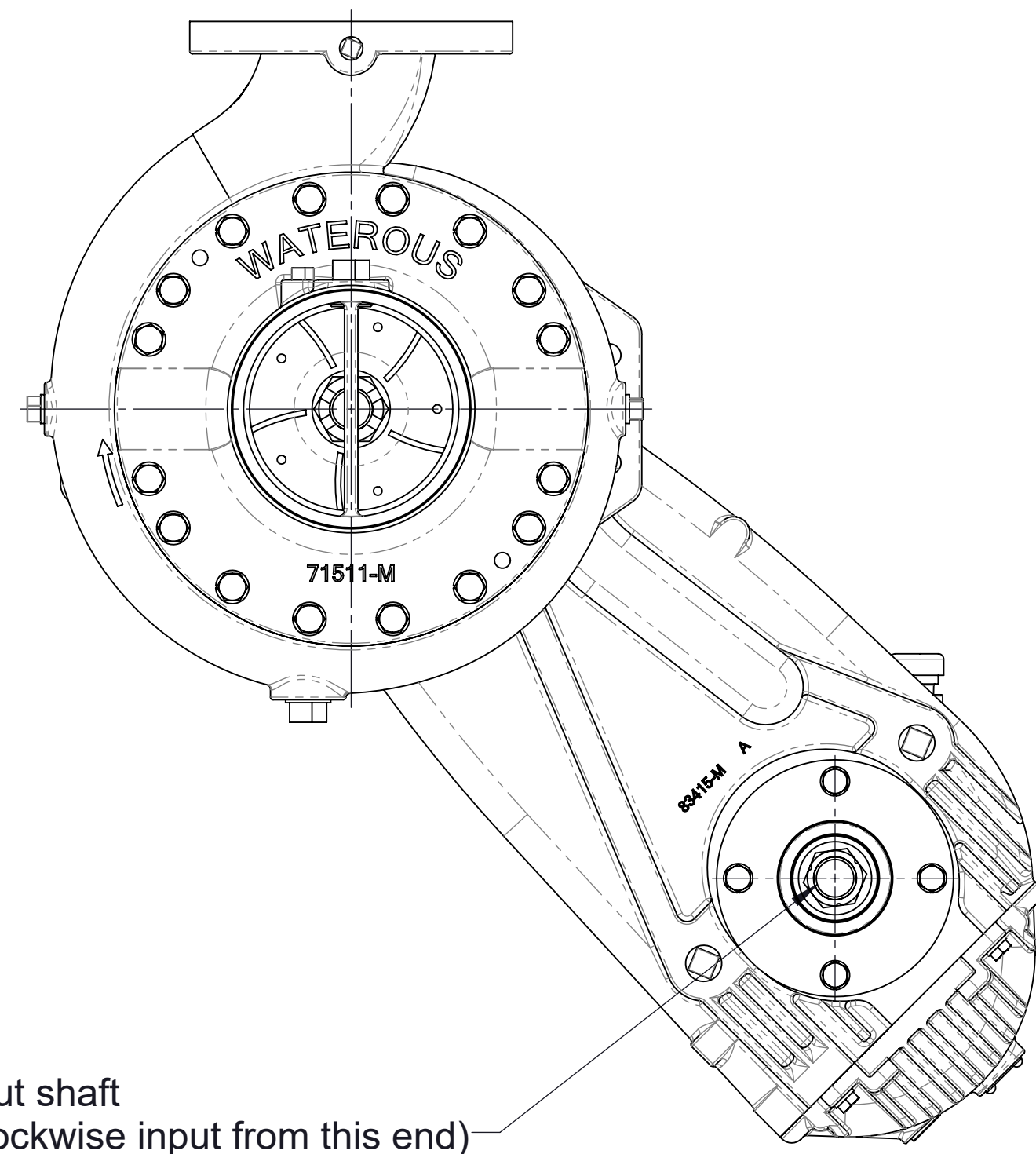
Clockwise or Counterclockwise Input  
(Clockwise input shown)

(CGVK in vertical mounting position shown, See page 13 for mounting positions)



SAE Bellhousing - J617				D	SAE Flywheel - J620		Drive Plate	
Size	A	B	C		Clutch No.	E	Part No.	Torque Rating
2	17.625in 447.68mm	19.250in 488.95mm	18.375in 466.73mm	8.250in 209.55mm	10	2.12in 53.85mm	V 2462	850 ft-lb 1153 Joules
3	16.125in 409.58mm	17.750in 450.85mm	16.875in 428.63mm	7.250in 184.15mm				
4	14.250in 361.95mm	15.875in 403.23mm	15.000in 381.00mm	7.250in 184.15mm				
2	17.625in 447.68mm	19.250in 488.95mm	18.375in 466.73mm	8.250in 209.55mm	11-1/2	1.56in 39.62mm	V 2463	
3	16.125in 409.58mm	17.750in 450.85mm	16.875in 428.63mm	7.250in 184.15mm				

**CG Series Pump with T Series Transmission**  
 Clockwise or Counterclockwise Input  
 (Clockwise input shown)  
 (CGVT in vertical mounting position shown, See page 13 for mounting positions)



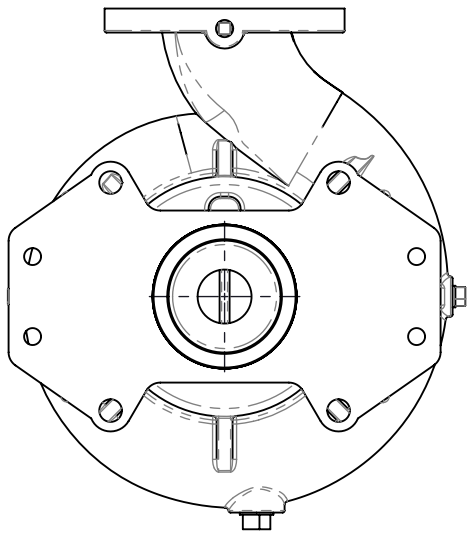
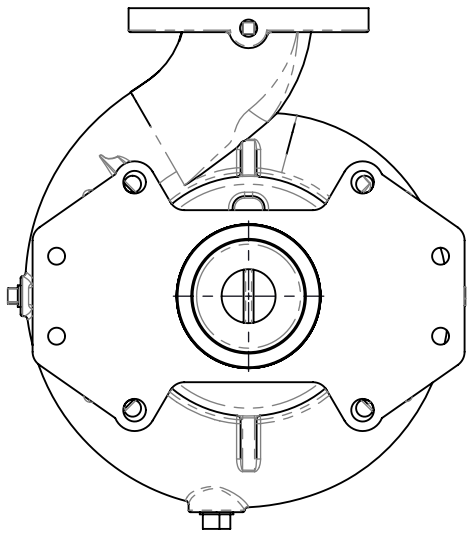
Drive Line		Ratio	Dim A	Dim B	Dim C	Dim D
Size	Spline					
1-1/2 in	1-1/2-10 SAE	1.70	11.288in 286.71mm	10.943in 277.94mm	6.111in 155.22mm	4.737in 120.32mm
		1.90	11.269in 286.24mm	10.924in 277.47mm	6.130in 155.70mm	4.755in 120.79mm
		2.10	11.239in 285.46mm	10.894in 276.70mm	6.160in 156.46mm	4.786in 121.56mm

**CG Series Pump with PA Series Transmission**

Clockwise Input

(CGVPA shown, See page 14 for mounting positions)

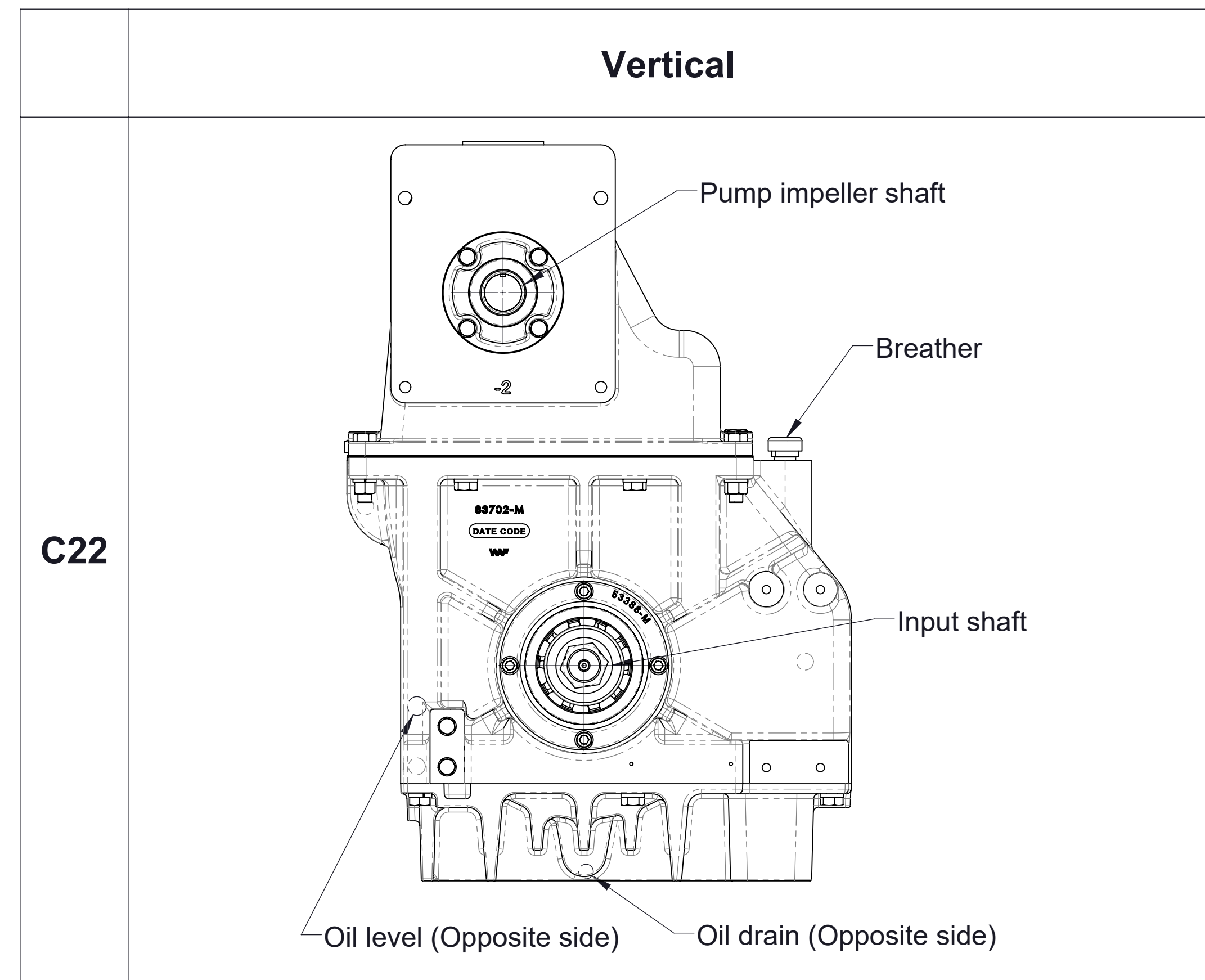
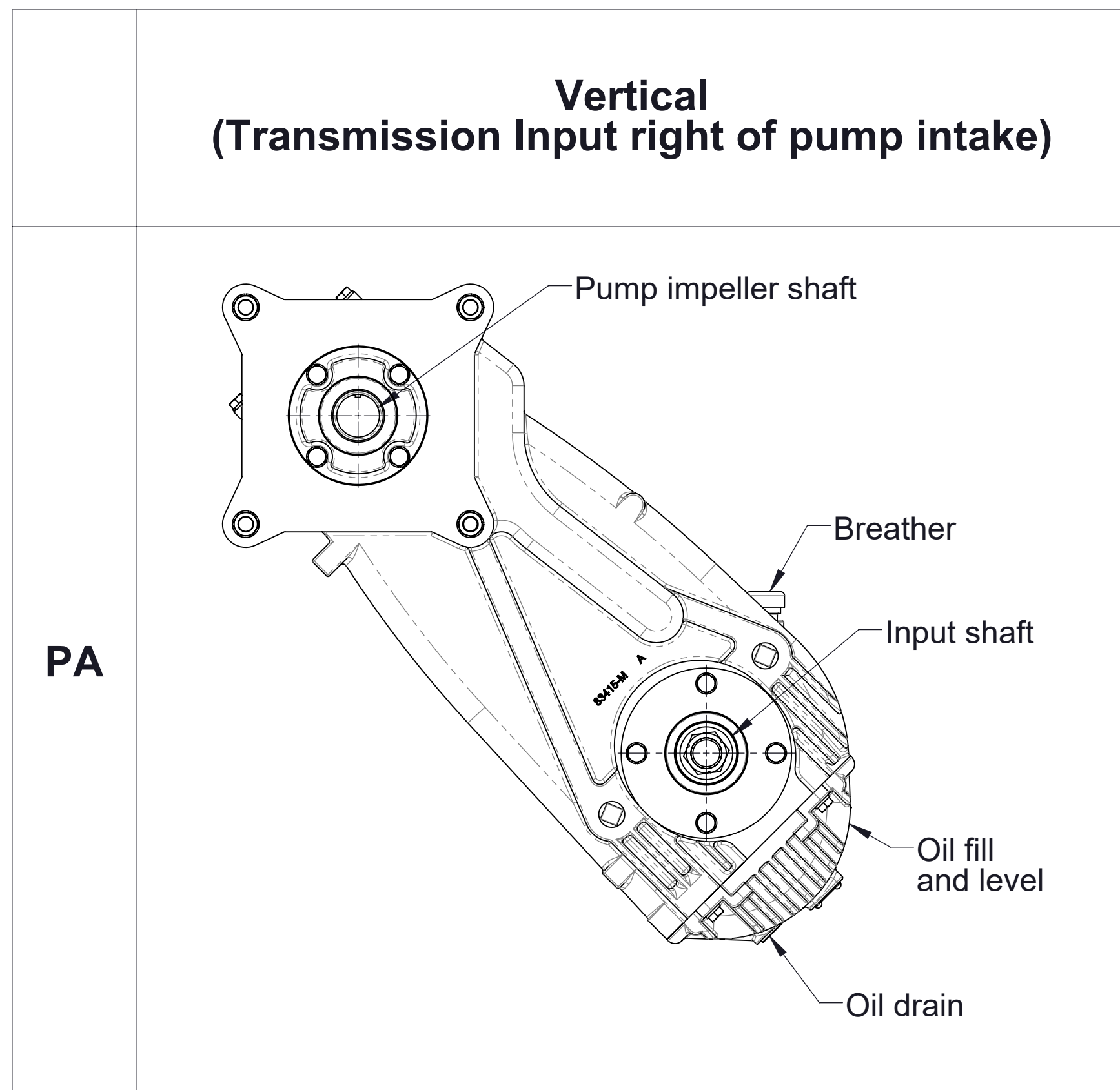
Note: See drawing DPL82080 for additional details of PA transmission

Discharge Position		Available with:			
		Transmission Series			
		C22 Pump mounted on input shaft side	K	PA Vertical (Right)	T
Up Clockwise (CW) Input Rotation		Yes	Yes	Yes	Yes
Up Counterclockwise (CCW) Input Rotation (CGV/CGVR Only)		N/A	Yes	N/A	Yes
<b>Discharge cannot be rotated independently of the transmission</b>					

Available pump discharge positions as viewed from transmission end of pump

	Vertical	Inverted	Left (CGV/CGVR Only)	Right (CGV/CGVR Only)
<b>K</b>	<p>Vertical view labels: Pump impeller shaft (Opposite side), Breather, Oil level (Opposite side), Input shaft.</p> <p>Inverted view labels: Oil cooler drain not required. Cooler will drain through pump., 2X Oil cooler hose connection, Input shaft, Oil level, Breather, Oil drain, Pump impeller shaft (Opposite side).</p>	<p>Left view labels: Input shaft, Breather, Oil level, Oil drain (Opposite side), Pump impeller shaft (Opposite side), 2X Oil cooler hose connection, Oil cooler drain, 1/4 NPT.</p> <p>Right view labels: Input shaft, Breather, Oil level, Oil drain (Opposite side), Pump impeller shaft (Opposite side), Oil cooler drain, 1/4 NPT, 2X Oil cooler hose connection.</p>		
<b>T</b>	<p>Vertical view labels: Pump impeller shaft (Opposite side), Breather, Oil level (Opposite side), Input shaft, Bellhousing adapter not shown.</p> <p>Inverted view labels: Oil cooler drain, 1/4 NPT, 2X Oil cooler hose connection, Oil cooler drain, 1/4 NPT, Oil drain.</p>	<p>Left view labels: Oil cooler drain, 1/4 NPT, 2X Oil cooler hose connection, Bellhousing adapter not shown, Input shaft, Oil level, Breather, Oil drain, Pump impeller shaft (Opposite side).</p> <p>Right view labels: Not Available.</p>	<p>Not Available</p> <p>Not Available</p>	

Available transmission mounting positions as viewed from transmission input shaft



Available transmission mounting positions as viewed from transmission input shaft